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JOURNAL

OF THE

United States Cavalry Association.

VOL. XXIV. JANUARY, 1914. No. 100

CAVALRY INSTRUCTION.*

BULLETIN No. 18.

WAR DEPARTMENT,
Washington, October 3, 1912.

With a view to standardizing the instruction imparted at the Military Academy and at the various service schools on the subject of the employment of Cavalry, the following is announced as the policy of the War Department in respect to the use of that arm:

1. Mounted action is the main role of the cavalry arm and its organization, armament, and instruction should be with a view to rendering it effective in such action.

Dismounted action is, however, a very important role of the cavalry, and neither an organization nor the method of instruction which falls to provide for the effective use of cavalry dismounted will enable it to perform fully its functions in war.

2. The organization should be such as to permit of the greatest mobility, which is the essential quality of the cavalry, while providing units of great smashing power in the charge and a sufficient number of rifles to make effective its use when required as a dismounted force.

3. Cavalry must maneuver freely and widely without fearing too much for its rear; and being often at a distance from the main body of an army, its commander must be clothed with authority to conform to actual conditions.

*Reprinted by request of the Chief of Staff of the Army.

4. While the chief task of the cavalry is to assist the other arms in accomplishing the common object, its role is often of primary importance. The action of cavalry must be bold and daring; it must, whenever practicable, assume the initiative, seeking out the enemy and placing him upon the defensive.

5. The principal weapon of cavalry in mounted action is the horse and the force of impact should be utilized to the utmost. The terrain and nature of the operations will determine which of the other weapons must be used.

6. When circumstances permit, cavalry opposed to cavalry should fight mounted, thus retaining the mobility and power of maneuver necessary to its security and success.

7. The historical value of cavalry, including the experience and evolution of our own and that of other countries, must be carefully studied, and due consideration should be given to the greater magnitude of our future cavalry operations as compared with our experiences since the Civil War.

8. The use to which cavalry should be put in campaign is summarized as follows:

a. To seek and destroy the enemy's cavalry.

b. Screening, contact and reconnaissance.

c. Seizing and holding important advanced or isolated positions, thus delaying the advance of the enemy until the arrival of the other arms.

d. To operate on the flank and in rear of the enemy.

e. Raids and other enterprises require great mobility.

f. The mounted charge at the opportune moment against Infantry or Field Artillery.

g. Energetic pursuit of a retreating enemy or covering retreat of its own forces.

h. When none of the above roles has been assigned to it, cavalry may go to the assistance (dismounted) of hard pressed infantry to fill gaps in the firing line.

By order of the Secretary of War:

W. W. WOTHERSPOON,
Major General, Acting Chief of Staff.

Official:

GEO. ANDREWS,
The Adjutant General.

THE STONEMAN RAID.

By Major General GEO. B. DAVIS, U: S. A., (Retired).

THE operations which I shall attempt to describe in this paper were of considerable importance as they presented the first conspicuous example of the separate employment of cavalry on such a large scale as to enable it to rely entirely upon its own resources, and to operate at a considerable distance from its supporting infantry. This form of employment was not entirely new. During the preceding year General Stuart had conducted two brilliant expeditions against the enemy, in one of which he had passed completely around the Army of the Potomac; but these operations had been otherwise barren of results, save to show that there was a field of employment for mounted troops that had not yet received the attention which it deserved.

In the operations upon which the cavalry of the Army of the Potomac was about to engage something more was intended than had been accomplished by General Stuart; for it was General Hooker's expectation that General Stoneman's command was so formidable in point of strength that, on reaching the rear of the Army of Northern Virginia, he would be able to check its expected retirement in the direction of Richmond until it could be supported by the main body of the Army of the Potomac. But this expectation, as we shall presently see, was not to be realized.

In the first year of the war it had been easier to raise regiments of cavalry, than to recruit the organizations of infantry which constitute the substance of an army in the field; and the States, after the first enthusiasm for enlistment had passed, were anxious to fill their quotas with mounted troops. As a result many cavalry regiments were raised and accepted before the War Department realized its mistake and reached the conclusion—to which it adhered with some consistency to the end

of the war that no more mounted regiments would be authorized or accepted as a part of any call that might be made upon the States for volunteers for the period of the war, or for a shorter term of enlistment. The Army of the Potomac received more than its share of these organizations which were employed upon all sorts of duties, none of which contributed materially to the success of its military operations. But efforts to correct these conditions were put forth at a much earlier date than is generally supposed, and the grand division organization of the Army of the Potomac under General Burnside shows a cavalry division of two brigades, under General Pleasanton, as forming a part of the Right Grand Division; while a brigade of four regiments under General Averell was attached to the center, and a brigade of five regiments under General Bayard to the Left Grand Division. We have here the equivalent of two large cavalry divisions as the possible nucleus for the organization of a cavalry corps.

While it may be conceded that each of the Grand Divisions, composed as it was of two corps of infantry, would need as large a force of cavalry as had been assigned to it in the Burnside organization, in the event of field operations being undertaken, the conclusion cannot be escaped that cavalry so attached however efficiently commanded, was in no condition for work at a distance from the main body of the organization of which it formed a part. And the substantial merit of General Hooker's reorganization of the arm will be found to consist in the idea that the cavalry of the army was to be so organized as to be entirely sufficient to itself, and able to operate independent of the infantry, and, if need be, at a considerable distance from it.

In order that the cavalry might be employed in large bodies it was first necessary that it should be given an appropriate organization, and placed under the control of able and experienced commanders. The tendency to organize the cavalry into larger units than regiments had been apparent at a relatively early date, going back, indeed, to the Peninsular Campaign of the preceding year. Nor was cavalry wanting in brave and resolute commanders. Buford had shown his skill and resourcefulness as the commander of a cavalry brigade in the Virginia Campaign of 1862, and Pleasanton, Gregg and Bayard

had rendered intelligent and useful services with similar commands in the same theater of military operations. But the brigades were attached to other organizations, and were too small for independent undertakings. It should not be lost from sight, also, that the spirit of self-confidence, which is so essential to separate cavalry operations, had yet to be developed. It has been said that the cavalry of the Army of the Potomac "*found itself*" in its combats with the enemy in central Virginia in the spring and early summer of 1863. And this statement is true. Brigades and divisions under Buford and Gregg, Grimes Davis, Averell and Pleasanton showed, on many brilliant occasions, that they were no longer afraid of the enemy, and that the redoubtable Stuart was to have his hands more than full in the brief period that was to elapse before he was to be removed by death from the scene of his brilliant activities.

The order of reorganization was issued on February 5, 1863.* The unwieldy arrangement of grand divisions was swept away, leaving the army corps, seven in number, as the largest units of infantry organization in the army at large. The cavalry was given a corps organization and placed under the command of General George Stoneman who had but recently been assigned to the command of the Third Army Corps. Stoneman was an officer of dragoons who had had considerable service on the Indian frontier before the outbreak of the war. The good reputation for efficiency which he had gained there had been substantially added to during his service as chief of cavalry and as an infantry commander in the Army of the Potomac. The division commanders were wisely chosen; Pleasanton was already in command of a division, Buford, Averell and Gregg were in command of brigades, and Buford was assigned to the most important of the smaller organizations—the "*regular*" or "*reserve*" brigade which was at first regarded as a separate command, but was subsequently assigned to the first division under Pleasanton.

At the beginning of April, 1863, General Lee still confronted the Army of the Potomac in the trenches from which General Burnside had vainly attempted to dislodge him in December of the preceding year, and the condition of the army and the ground

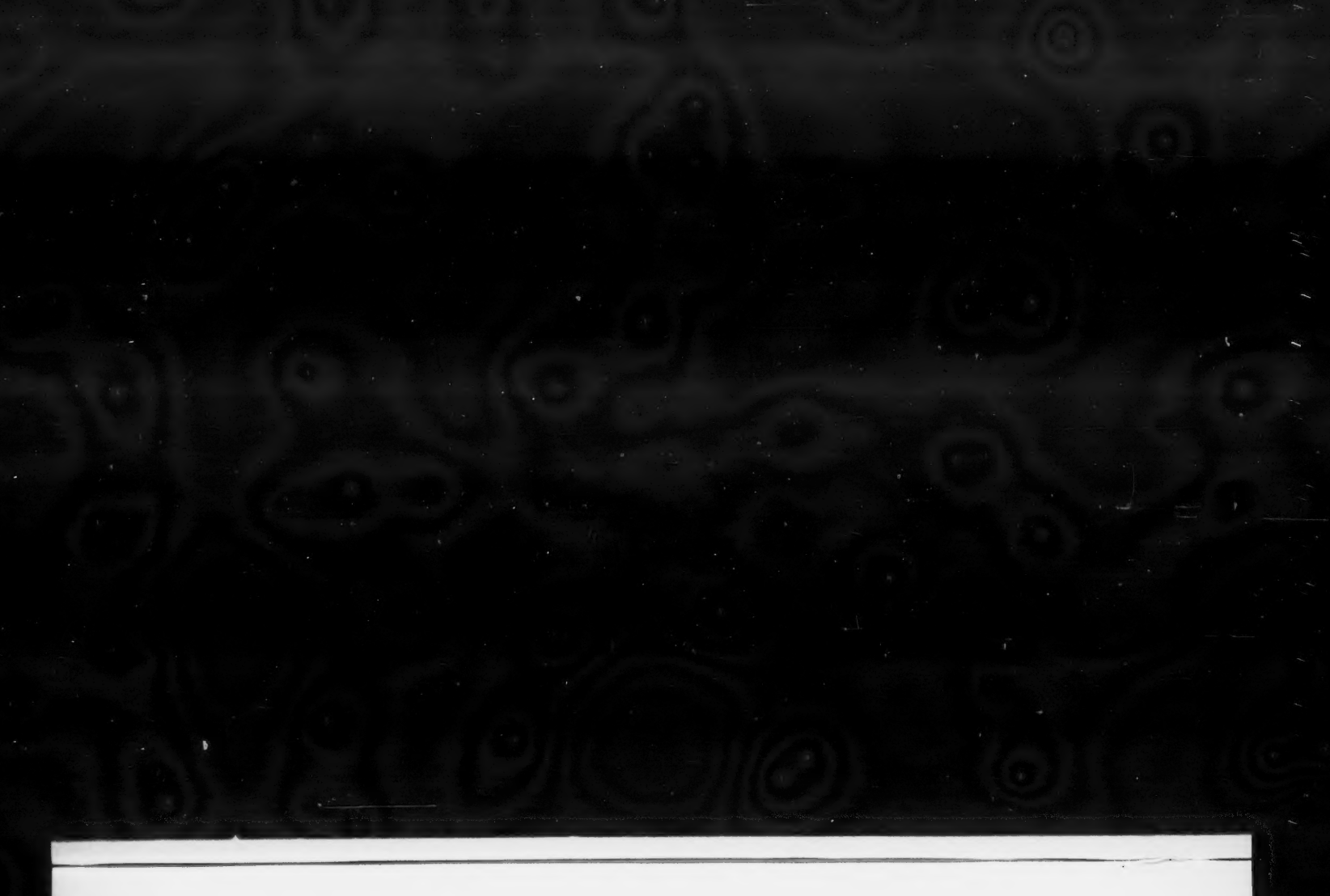
*War Records, Vol. XXV, Part II, p. 51.

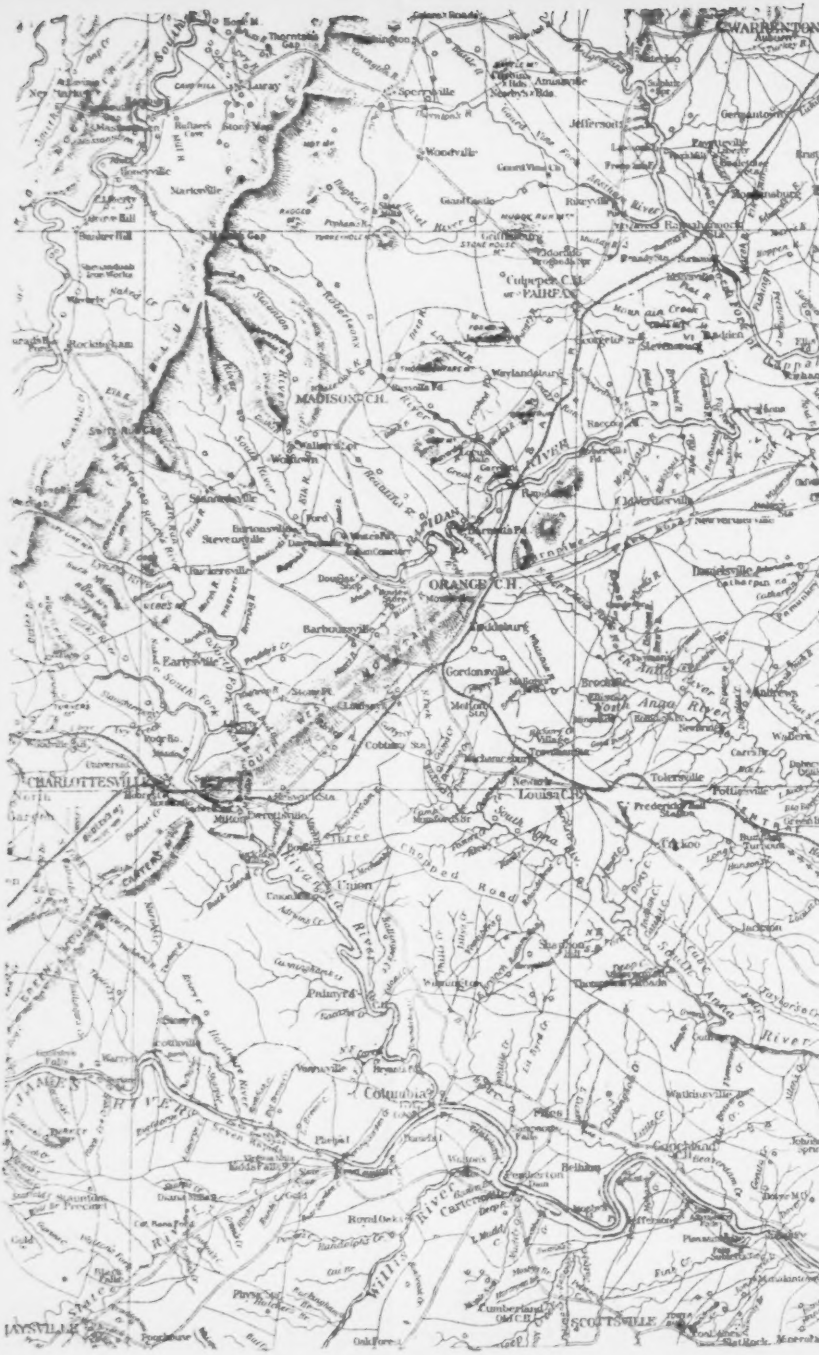
was such, in early April, as to suggest the propriety of a forward movement. General Hooker determined to take advantage of the favorable weather situation by an operation in the nature of a turning movement, which was to begin on April 13th. His plan was to leave Sedgwick with the 6th Corps, supported by Reynolds and Sickles, who was to cross in the vicinity of Fredericksburg and assault the enemy's position at Marye's Heights and Salem Church. While the attention of the enemy was thus engaged, he proposed to move up the river with the remainder of the army, including Reynolds and Sickles, who had been withdrawn from Sedgwick's command, and place himself on the left flank and rear of the Army of Northern Virginia, passing the river by pontoon bridges at the nearest fords.

In the general plan of campaign thus outlined the cavalry was to play a new and important part. After defeating a mixed force of Confederate cavalry and infantry that was posted in the upper reaches of the Rappahannock and Rapidan, Stoneman was to pass, by a wide sweep to the south and west, to a position between General Lee's army and Richmond, destroying the principal railroads and bridges, especially such as formed a part of General Lee's lines of communication.*

There are two routes by which the Army of the Potomac might have approached Richmond; one by Culpeper and Gordonsville was, and still is, the one favored by strategists; the other by Fredericksburg was chosen by the several commanding generals of the army, from Burnside to Grant, under some pressure from the administration, as the one least calculated to endanger the safety of the city of Washington. Burnside, on assuming command in 1862, had withdrawn from McClellan's position at Warrenton and, transferring his army to Fredericksburg, had met with a crushing defeat, and Hooker, somewhat against his judgment, had adopted substantially the same line of operations. As an Union advance into the open country toward Gordonville was always possible, General Lee had occupied that region by a force of cavalry sufficient to resist the advance of the enemy, should he attempt a movement in that direction. So that Hooker had to deal with the main body of General Lee's army in his immediate front and, with

*War Records, Vol. XXV, Part I, pp. 1,065-1,067.





SKETCH MAP OF NORTH

...RTHEASTERN VIRGINIA.

the cavalry, at times supported by infantry, which formed a constant menace to his right flank. It was with the force last described that General Stoneman had to deal. But General Stoneman's instructions contemplated something more than this. He was to place himself in General Lee's rear, in a position in which he would be able to hold the Confederate army in check until reinforcements could reach him. Nothing came of this, as we shall presently see, although Stoneman kept the tryst and, with diminished numbers, stood ready to delay any of the forces of General Lee that Hooker might drive in his direction.

During the inclement season that operated to prevent the execution of General Hooker's plan during the last half of the month of April, the cavalry corps had succeeded in establishing itself on the line of the Orange and Alexandria Railway, with headquarters at Warrenton Junction. The weather having shown some signs of improvement, General Stoneman was directed, on April 27th, to repair to Warrenton, on the following day, where he was to receive his final instructions from the commanding general of the army of the Potomac. These required Stoneman's command to cross the rivers somewhere between Rappahannock and Kelly's Fords. After the crossing had been accomplished the command was to be divided, one portion taking the route to Louisa Court House, by Raccoon Ford, while the other was to complete the operations, already begun, along the line of the Orange and Alexandria Railway. The instruction contemplated a junction of the cavalry with the main body of the army, but were not explicit as to where the meeting should take place, further than to suggest the line of the Pamunkey River as an immediate objective, where General Stoneman was to take up a position with a view to prevent the retreat of the Confederate army in that direction should the Army of the Potomac succeed in accomplishing its defeat in the operations which were about to begin in the vicinity of Chancellorsville. As will presently be seen, the fortune of war prevented the junction of the two commands, which were only united, at the close of the campaign, when the Union army had retired to its old camps on the north bank of the Rappahannock, in the neighborhood of Falmouth.

The bad weather which had so seriously interfered with the movements of the cavalry, and had prevented the main body of the infantry from moving at all, continued during the crossing of the rivers and finally compelled Stoneman to start on his journey with a diminished force of artillery and without wagons or pack animals. The discouraging climatic conditions which attended the beginning of the march do not seem to have extended to the spirit of the officers and men of the command of whom General Stoneman says in his report: "I take the occasion to say that from that time to the completion of the expedition I never, under the most trying circumstances and the most dicouraging prospects, saw a look, or heard a word from officers or private soldiers that indicated doubt or fear, nor, during the whole trip, did I hear a murmur or complaint. Each appeared to vie with the other as to how much, instead of how little he could do to forward the undertaking, and to look upon the expedition as his own personal affair. All felt as if they were going forward to the accomplishment of an object of the greatest importance to the army and the country, and they engaged in it regardless of the future or the consequences."

Excluding the division of Pleasanton, which remained at Falmouth, the two divisions which accompanied General Stoneman at the beginning of the movement consisted of 9,895 men,* accompanied by Robertson's and Tidball's batteries of horse artillery. On April 30th, Averell's division was ordered to continue his work along the upper waters of the Rappahannock. On the same day Stoneman himself, with Gregg's division, Buford's brigade and Robertson's battery, some 4,500 strong, with only such supplies as could be carried on the saddles of the officers and men turned in the direction of Raccoon Ford with a view to a crossing at the Rapidan. Assuming that the ford would be defended, Buford's brigade crossed at Mitchell's Ford, some miles below and, by a flank movement, caused the defenders of the ford to seek saftey in flight. The crossing was completed at about 10:00 o'clock on the night of April 30th, when it was learned that General Stuart had crossed at Somerville Ford the same morning and had passed in the direction

*War Records, Vol. XXV, Part I, p. 1,067.

of Fredericksburg. Had Stoneman been a few hours earlier, or had Stuart been delayed in his crossing, a decisive encounter would have been inevitable.

On reaching the south bank of the Rapidan, Stoneman, having learned of Stuart's movement in the direction of Chancellorsville, was able to adress himself to the operations of the raid, and to make such a distribution of his forces as would be calculated to accomplish the purpose of the expedition. To that end Gregg was sent in the direction of Louisa Court House, where he arrived at daybreak on May 2d. Buford, taking a more direct route by way of Verdiersville, crossed the North Anna and encamped on its south bank on the night of May 1st. Gregg having the larger command was to operate along the line of the Virginia Central Railway and the upper James with a view of reaching the canal above Richmond, while Buford was to turn to the southeast where he was to interrupt General Lee's communications with that city.

After crossing at Racoon Ford on April 30th, General Gregg marched in the direction of Orange Court House and reached Orange Spring before noon. From a captured cavalry outpost he learned that a wagon train had just passed in the direction of Spottsylvania and detached a small party in pursuit. Having received peremptory orders, however, to move on Louisa Court House this party was recalled and, leaving Orange Spring at 6:00 P. M., the command found itself in the vicinity of Louisa Court House at 3:00 A. M., on May 2d. Here preparations for an attack were made but, on advancing, no enemy was found and the Orange and Alexandria Railroad was destroyed for a distance of five miles. On the afternoon of May 2d, the march was resumed, crossing the South Anna River late in the day, and the division encamped at Thompson's Cross Roads where the headquarters of the corps had been established.

General Stoneman's plan of operations was now disclosed to his subordinate commanders. Three small columns composed of the 12th Illinois Cavalry under Lieut-.Col. Hasbrouck Davis, the 2d New York Cavalry under Colonel Judson Kilpatrick and the 1st New Jersey and 1st Maryland under Colonel Sir Percy Wyndham here separated from the main column. Wyndham marched in the direction of Columbia on the James River, where

the canal aqueduct at that point was ordered to be destroyed. Its destruction was attempted but the structure was of such a massive character as to resist all attempts in that direction with the means at hand. At Cedar Point the bridge across the James was destroyed, with four canal barges. The canal itself was cut in several places; some injury was done to the locks and gates, and considerable quantities of subsistence and other stores were destroyed. Colonel Wyndham's column rejoined the main command at Thompson's Cross Roads on May 4th after having marched fifty miles in eighteen hours.*

Gregg himself with the 1st Maine and 10th New York Cavalry moved down the South Anna from Thompson's with a view to destroy the bridges on that river between the Cross Roads and the Virginia Central Railroad. Captain Wesley Merritt of the 2d Cavalry was overtaken at the first bridge, which he had succeeded in destroying. Two bridges farther down the river were burned, the last to go being the Ground Squirrel Bridge on the Virginia Central Railway. Lieut. Col. Smith with Captain Merritt's squadron was then sent to destroy the railroad bridge across the South Anna near Ashland but, finding it strongly guarded, its destruction was not attempted. Gregg's command having completed the work assigned to it, was reassembled at Thompson's and Yanceyville on May 4th, the portion under his personal direction having marched 106 miles in 38 hours.†

Colonel Kilpatrick with his regiment, the 2d New York Cavalry, left Thompson's at 2:00 A. M., on May 3d; at daylight he was within fifteen miles of Hungarytown Station on the Richmond and Fredericksburg Railroad; as he had no means of knowing what force of the enemy would be encountered in the country to the north and northeast of Richmond, he concealed his command during the day and a part of the night. Hungary was reached at daylight of the 4th where several miles of track were destroyed. Passing to the Brooke turnpike he pushed back the defending forces under General Winder and turned down the Chickahominy to the Meadow Bridge which he burned. On the following day (May 5th) Colonel Kil-

*War Records, Vol. XXV, Part I, p. 1,085.

†War Records, Vol. XXV, Part I, pp. 1,080–1,083.

patrick surprised a small force of cavalry at Ayletts. Turning out of the valley of the Chickahominy he crossed the Mattapony, where he destroyed the ferry, reaching King's and Queen's Court House at sundown, where he was joined by a portion of Colonel Hasbrouck Davis command which had become detached from the main body. At 10:00 o'clock on the morning of May 7th he reached shelter at Gloucester Point, opposite Yorktown, having marched nearly 200 miles in less than five days. †

Lieut. Col. Hasbrouck Davis with the 12th Illinois Cavalry was to operate on the line of the Richmond and Fredericksburg Railway which constituted the principal line of supply for General Lee's command. He struck the railroad at Ashland on the morning of the 3d, where he destroyed an important bridge and a small amount of track. The Virginia Central Road was reached at Hanover Station where a trestle and the depot buildings, with a considerable quanity of stores, were destroyed. Turning in the direction of Hanover Court House, Colonel Davis marched to within seven miles of Richmond where he bivouacked, taking the road to Williamsburg early the next morning. At Tunstall's Station on the York River Railroad a train was encountered containing a force of Confederate infantry which was attacked, but without sufficient success to warrant the loss that would be occasioned were the attempt persisted in. Colonel Davis then determined to cross the Pamunkey and Mattapony Rivers and make for GloucesterPoint in conformity to the spirit of his instructions from General Stoneman. The crossing of the rivers was successfully accomplished, the former at Plunkett's Ferry and the latter at Walkerton. Resistance had been encountered from time to time and some opportunities to engage the enemy had presented themselves but had been desisted from, I think wisely, in view of the fact that Colonel Davis was directed to injure the enemy by destroying his property and means of communication rather than by resisting the efforts that were put forth to stay his progress. From this point of view his expedition was successful. The value of the property destroyed in the course of his operations was estimated at over one million dollars. †

*War Records, Vol. XXV, Hart I, p. 1,083.

†War Records, Vol. XXV, Part I. p. 1,085.

Buford, whose brigade operated with General Gregg, crossed the Rapidan at Morton's Ford on April 30th, and bivouacked at Raccoon Ford until daylight of May 1st. On the second he marched through Louisa Court House to Yanceyville. Here the 1st Cavalry under Captain Lord was detached towards Tolersville and Frederickshall to destroy the bridge across the North Anna on the main road to Fredericksburg. This was completely accomplished and Thompson's Cross Roads was reached on May 3d. Raiding parties were then sent out under Captains Drummond and Harrison of the 5th Cavalry with instructions to destroy the bridges on the roads constituting General Lee's means of communication with the country lying to his left and rear. At Fleming's Cross Roads, on May 4th, Captain Harrison, whose command had been reduced to a little more than thirty men, was attacked by a considerable force of the enemy. Captain Harrison attempted a mounted charge, which was met by the enemy in considerably superior force. Harrison's charge was simply engulfed in the ranks of the enemy and the greater part of his command were made prisoners.*

General Buford speaks in generous terms of the behavior of his command during the difficult operations in which it had been engaged. "During the whole expedition the roads were in a worse condition than I could have supposed to be possible and the command was called upon to endure much severe discomfiture. The men's rations were destroyed almost as soon as issued. No fires could be lighted to cook or dry by, and the dark, cold, wet nights that the men were compelled to march wore them out, but all, without exception, were full of enthusiasm, ready for any emergency, and did their duty with hearty good will. I have not heard of a complaint or a murmur."†

General Averell with the Second Division and B. F. Davis' brigade of Pleasanton's Division, to which Tidball's regular battery of horse artillery was attached, left its bivouac near Warrenton on April 28th and reached Rappahannock Bridge after a difficult night march, at 5:00 A. M., of the 29th. As the river was not fordable at that point, the division marched to

*War Records, Vol. XXV, Part I, p. 1,087.

†War Records, Vol. XXV, Part I, p. 1,090.

Kelly's Ford where it crossed. The passage of the river was completed at 3:00 P. M., on the 29th. On the following day, Averell was ordered to move up the river in the direction of Culpeper and Rapidan Station. He encountered the enemy soon after the days march began, the contact continuing until after dark. Stuart was believed to be near Brandy Station with his entire command, but such was not in fact the case, and the efforts put forth by that officer on May 1st and the days following had nothing to do with Averell's command.

On the 30th, Averell advanced to Culpeper Court House where the rear guard of the enemy was encountered and dispersed, and a small quantity of provisions fell into his hands. The pursuit of the enemy was continued by way of Cedar Mountain in the direction of the Rapidan, and Rapidan Station was reached late in the afternoon. On the morning of May 1st scouting parties were sent up and down the river, and his position at the ford was carefully examined. It was found that the Confederate defenses were so strong and well constructed as to necessitate a formal attack in order to cross the division and carry out his original instructions to continue his operations in the direction of Gordonsville. As he was resisted in his efforts to cross the bridge, its destruction was determined on though it was of no immediate use to the enemy and might prove to be of some service to him later on. The question as to who should burn the frail structure was shortly settled by General Lee who himself ordered its destruction. Here all aggressive purpose seemed to disappear and Averell desisted from further operations in the direction of Gordonsville. He seems to have concluded to join Buford or the main body of the army as circumstances might determine; circumstances seemed to "determine" in favor of the main body and, on May 3d he marched by way of Ely's Ford and rejoined the Army of the Potomac which was then retiring from its position in the vicinity of Chancellsorville.*

This was too much for Hooker, who relieved Averell from command and placed his division under the orders of General Pleasanton. The reasons for this action are set forth in General Hooker's dispatch of May 9th to the Adjutant General of the

*War Records, Vol. XXV, Part I, pp. 1,072–1,080.

Army in which, in speaking of Averell, he says, "My instructions were entirely disregarded by that officer and, in consequence thereof, the service of nearly 4,000 cavalry were lost, or nearly lost, to the country during an eventful period, when it was his plain duty to have rendered services of incalculable value. It is no excuse or justification of his course that he received instructions from General Stoneman in conflict with my own, and it was his duty to know that neither of them afforded an excuse for his culpable indifference and inactivity. If he disregarded all instructions it was his duty to do something. If the enemy did not come to him, he should have gone to the enemy."*

Averell was an experienced soldier and, within limits, an excellent division commander. But he was lacking in aggresiveness; his division on the whole was well commanded; his dispositions were always skillful; he never met with disaster but he never inflicted serious damage upon the enemy. He was later given the command of a division of cavalry in the Valley of Virginia in the following year, but met with the same fate at the hands of General Sheridan that had attended him under Stoneman in the valleys of the Rappahannock and Rapidan.

Stuart's command during the operations which I am attempting to describe, was composed of four brigades under the command of Generals Hampton, Fitzhugh Lee, W. H. F. Lee, and W. E. Jones; two of these those of Hampton and Jones took no part in these operations. Hampton was moving up through the Carolinas and Jones was employed in the Valley; for the time out of reach of the Army of Northern Virginia. It goes without saying that the two Lees, the only brigade commanders remaining with Stuart, had their hands full in the week intervening between the passage at Kellys Ford on April 29th and the withdrawal of the Army of the Potomac to the north bank of the Rappahannock on May 5th. Their participation in the resistance to Stoneman's advance was short; beginning on April 28th and ending on the 30th with the transfer of General Stuart, with the brigade of Fitzhugh Lee, to the main body of the Confederate army at Chancellorsville.

*War Records, Vol. XXV, Part I, p. 1,072.

But little remains of the official reports of Stuart's subordinate commanders during this period, and such records as are accessible contain but very meager accounts of the efforts put forth to resist the advance of General Stoneman into the upper waters of the Rappahannock and Rapidan. Whether this was due to the weather, which, equally embarrassed the troops of both armies, or to a deficiency in strength, or to the difficulty in ascertaining the whereabouts of the enemy; or whether it was due to a combination of the three causes we may never know.

General Stuart's report contains little that is calculated to assist in the prosecution of the inquiry.* He was at Culpepper when General Stoneman's march began. When the enemy crossed at Kelly's Ford, the fact was communicated to General W. H. F. Lee who took prompt measures to resist it by a quick concentration of his command above Kellys, where an efficient resistance could be offered. During the early stages of the operations Fitzhugh Lee was held in reserve at Brandy Station. During the 28th of April, Stuart learned that the enemy was moving in the direction of Maddens, and Fitz. Lee's brigade was immediately moved in that direction. He succeeded in piercing the enemy's column and learned that Slocum's, Howard's and Meade's corps were in motion toward Germanna Ford. Upon learning this General Stuart moved in the direction of Chancellorsville, with the brigade of Fitzhugh Lee, leaving the advance of the enemy to be resisted by the brigade of General W. H. F. Lee. Stuart was in full touch with General R. E. Lee on April 30th, and continued to participate in the operations about Chancellorsville until the end of the campaign.

It is not easy to see, at this distance of time, why General Stuart, who must have been fully aware of the purpose of General Sotneman's movement, should have abandoned his operations against the Federal cavalry and moved, with the stronger of his two brigades, to the support of the Army of Northern Virginia at Chancellorsville. The army of General Lee was separated into two parts, as was that of General Hooker, but it was as easy, or as difficult, for Lee to concentrate as it was for Hooker. The march does not seem to have been ordered, or

*War Records, Vol. XXV, Part I, pp. 1,045–1,048.

even suggested by General Lee, who was not at the moment in great need of cavalry assistance. General Longstreet was absent, without his powerful aid, he had succeeded in driving General Hooker's army to the north bank of the Rapidan. In General Lee's letters to Stuart of this period, written when Hooker's plans of advance had not been fully disclosed, save such as related to General Stoneman's movement to the upper Rapidan, he displayed no anxiety for Stuart's personal presence with his command, but evidently contemplates that the operations against the enemy's cavalry will be persisted in, and speaks of efforts that have been put forth to reinforce the cavalry divisions by the brigades of Hampton and Jones. Writing under date of May 1st, General Lee says "we are now engaged" with Meade's corps, and that Howard's corps had preceded him across the Rapidan; he also asks "what has become of the other two?" There is nothing in this dispatch that would be calculated to divert General Stuart, with the major part of his command, from his field of activity in the region of the upper Rapidan.

At 1:00 P. M.,on April 29th, Stuart advised General Lee that the 5th, 11th and 12th Army Corps had marched toward Germanna Ford, making it clear that Hooker was attempting to turn the Confederate position at Fredericksburg. Stuart then moved with Fitz. Lee's brigade; the Rapidan was crossed on the night of the 29th and, he reached Todd's Tavern in the Wilderness late on the following day where he reported his presence to General Lee. After taking a successful and distinguished part in the operations at Chancellorsville, where he arrived in time to assist Jackson in his turning movement against the 11th Corps and to succeed that officer when he received a disabling wound somewhat later in the day. He was himself succeeded in Jackson's command by General A. P. Hill and resumed the direction of his cavalry division which was soon to be increased by considerable reinforcements, and to receive the organization of a cavalry corps. While so employed with the main body of the Confederate, army Stuart missed the opportunity, of which we are sure he would have made the most, to oppose the return of Stoneman's command to the lines of the Army of the Potomac.

After Stuart's departure to join the army under General Lee, W. H. F. Lee, who remained with a single brigade to oppose the advance of General Stoneman, found himself unable to check, effectually, the measures of destruction in which the Union cavalry was engaged after it reached Louisa Court House. His efforts were brilliant and resourceful but without avail in face of Gregg's division and Buford's brigade which then constituted the command of General Stoneman. He reached Columbia too late to prevent the destruction of several bridges and a considerable quantity of subsistence stores but, fortunately, in time to prevent injury to the great canal aqueduct at that point. Continuing the pursuit General Lee encountered a small party of about thirty men under Captain Owens of the 5th Cavalry. Owen's force was attacked by a squadron of the 9th Virginia Cavalry in a mounted charge with sabers. He attempted to counter charge, but was overpowered with the loss of his entire command. Lee then retired to Gordonsville. There was an unimportant encounter at the North Anna Bridge on May 6th and, on the following day, being no longer in touch with the enemy, he moved by Trevillian Station and Louisa Court House to Orange Court House.*

A word remains to be said as to the return of General Stoneman's command to the lines of the Army of the Potomac. The several units of the command, except Davis and Kilpatrick, having reassembled, it now became necessary for the corps commander to concert arrangements for the homeward journey. In point of fact General Stoneman knew very little as to the movements on any part of his command save that which he had conducted to the enemy's rear. Whether Averell had fared well or badly, he had no means of knowing. The commanding general had not met him, on the Pamunky, or elsewhere, as he had confidently hoped and the rumors that had reached him from time to time pointed to a defeat, but how extensive the reverse had been he had no means of knowing. Nor did he know whether his return would be opposed by cavalry or infantry or by both. Making a reasonable allowance for all the untoward incidents which he might encounter on his homeward march, he wisely determined to take a wide

*War Records, Vol. XXV, Part I, pp. 1,097–1,099.

course to the west so as to give him room to meet or avoid any force that might be sent into the upper waters of the Rapidan to resist, or prevent his return. It was not to be conceived that Stuart would allow him to return unmolested to his positions in rear of the Army of the Potomac, or that General Lee would fail to support his great subordinate with infantry, so soon as General Stoneman's line of march was indicated. He could not have hoped that both Lee and Stuart would ignore his approach and allow him to return, by his old trail, and leisurely resume his camping ground at Belle Plain. But this was precisely what they did do, as we have already seen.

Stoneman therefore determined to create the impression that he was to return by way of Gordonsville, where a force of the enemy was known to be. To that end Buford's brigade was reassembled at Flemings Cross Roads on May 5th, where the best conditioned horses, some 646 in number, were selected and the command put in motion in the direction of Gordonsville. Finding the country not well adapted to the expeditious movement of cavalry, Buford marched to Louisa Court House where he found that telegraphic communication had been reëstablished by the enemy between Richmond and Gordonsville. The lines were again destroyed and the march was resumed. At Trevillian Station the pumps were disabled and the tracks destroyed with a quantity of subsistence stores and ammunition. When within two miles of Gordonsville the enemy was found to be in position with a force of all arms—infantry, artillery and cavalry. As Buford's instructions were to threaten Gordonsville and not to bring on an engagement there, he turned north and reached Orange Springs, on the north bank of the North Anna, at daylight on May 6th, where he was joined by Stoneman and Gregg. Toward evening the command was again put in motion and reached Raccoon Ford on the Rapidan, after a difficult night march, on the morning of the 7th; here the entire command was crossed in safety and Kelly's Ford was reached the same night. The command was then established on the line of Deep Run along the lower Rappahannock.

General Gregg's detachment having returned during the 4th, except those of Kilpatrick and Hasbrouck Davis, who had safely established themselves at Gloucester Point, Stone-

man set out on his return on the morning of the 5th. After an extremely difficult march he reached the Rapidan at Raccoon Ford at daylight on May 6th; resting until noon he turned to the east, reached Kelly's Ford at 9:00 A. M., on the 7th; he crossed on the next day and reached his old camp at Belle Plain on May 11th.

There seems to be a very general misapprehension as to the nature of the operation which has become known as "Stoneman's Raid," the popular view being that General Stoneman, with the three divisions composing the cavalry corps, accompanied by two brigades of horse artillery, undertook a difficult and dangerous march in rear of the Confederate Army of Northern Virginia from which, a few days later, he emerged, his operation crowned with success. This is very far from the truth. In point of fact no such command accompanied General Stoneman in his movement. The corps consisted, normally, of about 12,000 men. In the operations of the raid General Pleasanton's division took no part, save to detach Grimes Davis brigade for service with Averell. The second division, under General Averell accompanied General Stoneman to Raccoon Ford, but was detached for service at and beyond Rapidan Station, at the completion of which he returned to the main army. Gregg alone, with his small division of two brigades to which was added the Reserve Brigade under Buford, and Robertsons excellent horse battery, constituted the raiding force, less than 4,500 in number, which operated under the immediate direction of the corps commander.

After the raid was well under way its advance was intelligently, but inefficiently opposed—not by Stuart himself— but by W. H. F. Lee's brigade of Stuart's divsion from 1,500 to 1,800 strong. Lee had enough men to oppose any of the fractions of General Stoneman's command that he might chance to encounter, provided he kept them together, but he had not enough to enable him to measure swords with Gregg's division or Buford's brigade, and undertaking clearly beyond his strength and which he was sensible enough not to attempt. General Stoneman does not seem to have suffered by reason of the fact that two-thirds of his command was operating elsewhere, though he would have been seriously embarrassed if General

Hooker had succeeded in turning Lee's army back in the direction of Richmond, as he would have been unable to oppose or delay his retirement until he could have been joined by a supporting force of infantry from the Army of the Potomac. But this was not to be. Indeed it may well be doubted whether Stoneman attached much importance to Hooker's assurances that he would meet in him in six days, or he would have been slow to detach half of his command under Averell to follow the enemy into the upper Rapidan.

There was some ground for the belief, at the opening of the Chancellorsville campaign, that such a result might reasonably be expected to attend the great turning movement upon which the army was about to enter. The Army of the Potomac was in excellent spirits, the early movements promised well; the only feature of discouragement being the culpable collapse of Hooker himself at the decisive moment of the battle. The Eleventh Corps had met the full force of Jackson's blow, but was not hopelessly disorganized, and five efficient and well commanded army corps were on the field in positions from which they could engage the enemy, some of them to great advantage. Indeed General Hooker himself was the only thoroughly defeated man in the Army of the Potomac. The second of the purposes to which General Stoneman's attention was drawn in his instruction related to the work of destruction which he was called upon to undertake. He was to destroy the railroads connecting Richmond with Gordonsville and Fredericksburg, together with such plank roads, bridges, turnpikes and other means of communication as were likely to prove useful to the enemy, and especially those in rear of General Lee; he was also to capture or destroy such stores as were likely to find their way into the hands of the Confederate Subsistence Department. The work of destruction was done as thoroughly as possible with the means at hand, but without seriously imparing the efficiency of the army of the enemy, or greatly interfering with his movements; but this was due, in great part, to the fact that General Lee had determined, some time before the opening of the campaign, to transfer the theater of his activity to the territory of the enemy, and to undertake an invasion of Pennsylvania, so that the lines that suffered most at Stoneman's hands ceased

for the time to be of importance, and were repaired or replaced during the summer before they were again needed as lines of communication. As to the destruction of provisions, ammunition and munitions of war generally, I doubt whether the subsistence, forage and other articles amounted, in money value to more than $100,000. General Stoneman himself complains of the injury, due to waste and spoiling of property, which was done by the troops with no compensating advantage.

When all has been said, it must be concluded, I think, that well conducted operations like those of General Stoneman, are fully worth the loss that is incurred in their prosecution. The influence exerted upon the troops who take part in them is great and immediate, and admits of no question. The experience gained by officers of all grades in outpost work, reconnaissance and troop leading is also worthy of notice, as more of it can be gained in a week of raiding, at a distance from the main body of the army, then from months of participation in the ordinary routine work of an army in the field.

While Stoneman's operations were in progress in central Virginia, a movement of similar character was being carried out in the Valley of the Mississippi. Colonel Grierson with three mounted regiments, the 6th and 7th Illinois and 2d Iowa Cavalry, left La Grange, Tenn., on April 17th and made their way to Baton Rogue, La., where they arrived on May 2d. It was Colonel Grierson's purpose to march through the enemy's country, defending himself en route, and inflicting such incidental damage as was possible. The expedition was entirely successful and reflects great credit upon its commander and the troops who composed it. The 2d Iowa Cavalry, under Colonel Edward Hatch, was detached to carry out certain difficult in structions, after which it was to fight its way back to its starting point. The skill and energy shown by Colonel Hatch and his men in this undertaaking demanded and received the unstinted praise of the officers in chief command of the Union forces in the Valley of the Mississippi.

Fifty years have passed since the first great cavalry raid of modern times moved out of its camps, severed its connection with the supporting infantry, and entered upon its errand of destruction. The text books tell us that such operations are

useful in reaching outlying detachments, in breaking through protecting screens and in destroying the evening's lines of supply and communication. These purposes were fully and intelligently accomplished by General Stoneman, whose movements continue to be regarded as a classic and as a model for imitation the world over. Since the cavalry corps of the Army of the Potomac passed out of existence, there have been great wars in which opportunities for operating in the enemy's rear have presented themselves but, in a majority of cases, have not been taken advantage of.

Efforts have been put forth, at times, to conduct such undertakings, along the lines laid down by Stoneman, Grierson, Sheridan and Wilson, but none have been so clear cut and successful as those carried on with such resourceful skill by the commanders whose names and services have rendered the cavalry of the United States Army illustrious.

Nor can we dismiss from consideration the brilliant operations, differing in no material respect from those already described, which carried on by Stuart in the east and by Van Dorn, Forrest, Wheeler and Morgan in the west which have given these commanders a distinguished place in the history of the developement of modern cavalry. In brilliancy of conception and thoroughness of execution they have never been surpassed, and will be regarded in the future as operations in the highest degree worthy of study by officers of all grades in the cavalry arm of the military service.

THE PISTOL, THE MELLAY AND THE FIGHT AT DEVIL'S RIVER.

By Colonel EBIN SWIFT, Eighth Cavalry.

PRIVATE MULVANEY was relating a conversation with Lieutenant Brazenose, "I sez to the Lift'nint:—'Sor,' sez I, you've the makin's in you av a great man; but, av you'll let an ould sodger spake, you're too fond of The-*ourisin*.'" He shuk hands wid me and sez:—'Hit high, hit low, there's no plasin you, Malvaney. You've seen me waltzin' through Lung-tungpen like a Red Injin widout de war paint, an' you sa I'm too fond av The-*ourisin*.'"

If we do not seek for too close an application of this authentic bit of history we may at least find in it a suggestion that one fault of our academic system of education is to build theories. Most of the professions are breaking away from this habit but the military profession seems to be about the last to adopt the idea that experience, practice and theory should go hand in hand and follow each other in logical sequence.

In the cavalry there are important questions to be settled but after years of argument their seems to be no more prospects of agreement now than at the beginning. Among these questions which thus appear with monotonous regularity is that of arms for the cavalryman. In recalling what has been said so far we are struck by several points of similarity. The fondness for "the-*ourisin*" is shown in plausible statements which are hard to disapprove. In the reminiscences of men who have had experience in war we are impressed by the limited vision of the individual. From our attempts to teach the use of weapons in time of peace we are apt to form erroneous theories for war.

Improvement is the main object for which we strive. It is found in two ways, either by a furious habit of change or by seeking for experience as a guide. The first is said to be characteristic of democracies which frequently ignore the principles

which made them great and revert to Simian characteristics even in the midst of high civilization. The lamp of experience ought to be the safest guide but in order to be followed without question there would have to be a great wealth of examples of the same kind, or an ability to pick out logical conclusions from confusing examples.

In our army and in the question of armament these difficulties seem to be marked.

The object of this paper is to attempt to select an experience from one of the earliest examples of the use of the pistol in war, to examine it to see if it furnishes safe data for conclusions upon the question of arms for cavalrymen and to answer the principal arguments against its efficiency.

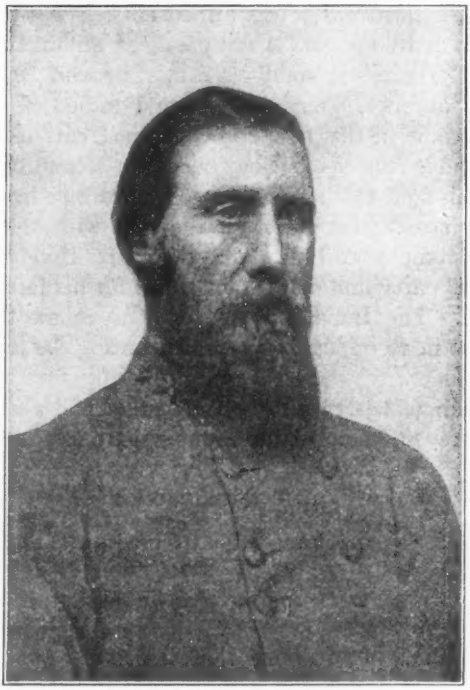
1. THE DOCUMENTS IN THE CASE.

The accounts of the fight are contained in the official report of Lieutenant John B. Hood, 2d Cavalry, which was rendered shortly afterwards; in the book "Advance and Retreat," by the same author, about ten years after, when he had become a Lieutenant General and the commander of a great army; in Price's "Across the Continent with the Fifth Cavalry;" and in Brackett's "History of Cavalry." Colonel Brackett was an officer of the regiment at the same time with Hood. Captain Price joined the regiment in 1866 and spent some years collecting material for his book. Both Brackett and Price had opportunities to get details not mentioned in Hood's accounts, as the incident was common talk in the regiment for many years. No important difference seems to exist in any of the accounts. All accounts are brief and do not indicate an attempt to make a "story" out of the affair. So far they are satisfactory but they elaborate some insignificant details and ignore more important ones, making it necessary to go to some trouble to supply the latter.

2. THE NARRATIVE.

This general agreement simplifies the task of building up a narrative of the whole action, supplementing undoubted facts by those that seem most probable from our own general knowledge.

Lieutenant John B. Hood with seventeen fighting men of "G" Troop of the Fifth (old Second) Cavalry was scouting after Lipan and Comanche Indians on July 20, 1857, with orders to attack any parties which were found off their reservations. His pack mules and guard had been left in rear. His men were armed with Colts revolvers, loaded with six paper cartridges,



LIEUTENANT GENERAL JOHN B. HOOD, C. S. A.
Born 1831; West Point 1853; Died 1879.

and with muzzle loading carbines, firing similar ammunition. Four days had been consumed at an average march of fifty miles per day, mostly without water, when toward the close of the fourth day the party approached the head of Devil's river in Texas. The appearance of a small party of Indians showing a white flag on a distant ridge led Hood to change his course and to ride toward them.

The view was partly broken by piles of dead grass which the Indians had collected and by bunches of chaparral. Approaching to within thirty yards of the flag with carbines at "advance" Hood found himself attacked suddenly by about three times his force, a part of whom charged on horseback with lances, another part fired on foot with bows and arrows and also with guns which were passed to loaders in rear after being fired, a third party was armed entirely with bows and arrows. In many respects it was partly an ambush and partly a surprise. There was some close fighting and Hood rushed the enemy at once, went through and rallied beyond. He fired his carbine in this first onset, returned carbines, drew his revolvers and led his men back at once in a second charge. So close was this fight that an Indian pulled a carbine from a soldier and others struck the horses in the face with their shields. Then with empty carbines and revolvers Hood withdrew, collected his party and started for water for his famished men and horses. The Indians in no shape to renew the conflict went off too in an opposite direction chanting the songs of the dead.

The Indians lost twenty-two men killed and wounded; the troops lost seven including the commander badly wounded.

3. THE POINTS IN DOUBT.

There are several points about which some doubt will be felt:

(*a*) *As to the amount of carbine fire.*

It was the day of percussion caps, paper cartridges and muzzle loaders. Reloading on horseback in a charge was impossible. The amount of carbine fire if any could not have been more than one shot for each carbine or seventeen in all. As the action began while the troopers had carbines at "advance" they must have emptied them first. The effect of this fire we may only conjecture. From what we know of its difficulties under the double task of guiding a horse and of aiming a gun we may conclude that it was not very effective.

In 1855 when this regiment was organized one squadron (two troops) was armed with the Perry breech loading carbine.

We have no further record of it, or what became of it, but there is a tradition that it was a failure and was soon discarded. If it had been used at Devil's River it would not have had that fate.

(*a*) *As to the amount of pistol fire:*

The Navy Colt revolver was a six shooter but was a dangerous weapon with six shots in the cylinder because the safety notch was not safe. It is probable that it was used then as it was for many years after, and as it is now, although much improved, with the hammer down on an empty chamber. However for the purpose of this discussion and in the absence of positive knowledge let us consider that each revolver had six paper cartridges. All accounts agree that Hood led his men in a return charge after the first onset, using revolvers only and that the fight ended with empty revolvers. If each man had one revolver there were one hundred and two shots fired from that weapon. It is stated somewhere that Hood's men had two revolvers apiece. This does not appear in the accounts of the armament of the regiment in 1855. The balance of Hood's troop were in the field at the same time. There were no other cavalry troops at the post. Under no probable theory could the party have armed themselves with two revolvers apiece. Hood himself perhaps carried a carbine and a pistol, the same as other men of his command.

(*c*) *The total number of shots fired by Hood's men:*

From the figures here given not more than one hundred and nineteen shots were fired.

(*d*) *The duration of the action:*

It began at thirty yards. Hood and his men charged forward and charged again, at once. There was no time to reload, which was a long operation with the paper cartridge, and the number of shots fired was the number actually in the weapons when the action began. Twenty seconds at charging gait would have been ample time to reach the limit of the first charge and the same for the second charge, from what we know of the terrain. A few more seconds to collect the scattered troopers, a short scrimmage and it was all over.

(*e*) *Was it a victory or a defeat?*

Brackett calls it a victory for the Indians. Price calls it a repulse for Hood. Hood claims a victory. This seems to be largely a matter of definition and opinion. The Indians suffered a loss of nearly fifty per cent. and if Hood had not been severely wounded himself the party would probably have been completely destroyed.

(*f*) *As to the number engaged:*

Hood had seventeen men including himself. The accounts say that he was attacked by three times his numbers which would be by fifty-one Indians. More definite figures would indicate forty-five Indians in action with others loading guns and passing them to the front. After all it does not seem probable that the exact number of Indians was known.

(4) THE APPLICATION OF THE HISTORICAL INCIDENT TO THE CASE IN POINT.

This will be evident as soon as we study the objections that have been raised to the revolver as a cavalry weapon, It will probably be instructive to take each of these objections and to examine them in the light of this bit of history to see how practice and theory stand the test of comparison.

The objections are many but it appears possible to boil them down to a substantial list as follows:

(*a*) *Mounted fire is inaccurate:*

We must ask ourselves the question, what is accuracy in war and what is not? What is it for the different arms of the service? Does the pistol fail on comparison?

The ease with which the peace results of target practice can be obtained and predicted both under ideal conditions of target practice and under unknown conditions in unfamiliar ground has encouraged investigation to determine the probable results of war.

Careful comparison of these results in cases where complete data could be obtained have resulted in the theory that this relation could be expressed by 1:20—that is to say that when one hit could be counted under unknown conditions in peace it will take twenty times as many shots under similar conditions

in war to get a hit. This modifying factor is called a war factor.

Thus Livermore and Raymond of our service, acting independently, have agreed that in a standard case of the fire of 64 men, lying down at 2½ yards interval, firing at 450 yards, at similar target, both on an open plain, both lines perpendicular to the line of fire, with equal effect on both sides, both fairly good troops, perfectly fresh, with opportunity to make a fair estimate of the distance, in all these things being considered we may expect a loss of one man hit for 400 shots fired in one minute. And as the proportion of killed to wounded is usually about 1 to 4 we would fire 1,600 shots to kill a man under the ideal conditions of this standard case. But for changing conditions other modifiers must be applied, so that if we modify the standard by previous movement at double time, by firing at a slight elevation, by broadening the interval between skirmishers, by giving them slight intrenchments, it will take ten times as many shots, say 16,000 shots to kill.

That these results of theory are not absurd is proved by the fact that the Russians expended in the Manchuria campaign 4,200 rounds of small arms ammunition for 1 man killed.

All this is confirmatory of the old saying that it takes a man's weight in lead to kill him in war.

For artillery results the measure of accuracy would be still further reduced from the peace result if we rely upon the experience of this war. Take 400,000 rounds of artillery ammunition expended at Mukden. Counting 8 per cent. of casualties as a result of artillery fire, and 1 killed to 4 wounded, and 1 round at 20 pounds, we get about 5,000 pounds of ammunition for 1 man killed.

On counting the 108,000 rounds fired by the Russians' batteries of the 1st and 3d Siberian Corps at Liao Yang, the number of killed and wounded Japanese opposite these corps at 13,000 the proportion of killed to wounded at 1 to 4 and the proportion of 7½ per cent. due to artillery fire in that battle and we have four and one-half tons of ammunition for one man killed.

These figures are given without any good facilities for extension or verification. They are correct enough to show

that so far as the small arm and the field gun are concerned the indictment of "inaccuracy" might fairly hold against them as well as against the pistol used in mounted fire. In fact we might even say that accuracy in war is a dream. Dreams come true sometimes and so does accuracy happen, but in making a law of facts we must consider only average results and reject those which are abnormal.

Data for the pistol is hard to find. The war factor for the pistol has not been calculated. We may claim that the fight at Devil's River was typical of the pistol. If it can be supported by a sufficient number of experiences of the same kind it will settle the question as to the rules of action for this arm.

The experience of peace firing with the pistol under the rules so far adopted are not encouraging. Probably one hit in five shots would be a good average result, as target practice is conducted. If we accept this result our study of the experience of other arms would certainly lead us to expect an insignificant result in war, under the influence of fatigue, excitement and fear, combined in the French word "émotion" which is so easy to understand and so hard to translate.

If the loss of the Indians was twenty-two and the number of shots fired was not more than one hundred and nineteen there was one hit in five and one-tenth shots, which is a war result identical with the peace result, as first stated.

It seems to be reasonable then that the peace practice does not conform closely enough to service conditions. The range is too great, the solid black target without even a button to catch the eye is not fair, troopers should be required to work out their horses by a half-mile or more at charging gait before firing the pistol.

To close the question of the accuracy of mounted fire let us not forget that since war began one hit in five has meant a beaten enemy.

(*b*) *It is more dangerous to friend than to foe:*

This objection seems plausible. It has been made frequently by veterans of the Civil War who ought to know, but beyond the bold statement the facts do not seem to be given.

If any of Hood's party was hit by a friendly bullet it is probable that some noise of the fact would have been spread abroad. Such a shot awakens a deeper resentment than a shot from the enemy and is hard to forgive. I have talked about this action with a half dozen of Hood's contemporaries in the regiment at that time and I do not think this point was ever mentioned. The figures show that even if Hood and all his men had been shot by their own bullets this argument would still be untenable. More or less stray shots are to be expected always and we are told that Japanese infantry was often under fire of their own guns. Stonewall Jackson, Longstreet and Jenkins were shot by their own men.

(*c*) *The men with revolvers will invariably slow down and fire at a distance instead of coming to close quarters:*

This statement has been made by federal officers who served in the Civil War. A contrary statement has been made by the other side. Without stopping to weigh the evidence in the general case we may say that Hood and his men did not do this and that if they had done so they would have made no hits.

(*d*) *You cannot "lead" your men:*

Hood did go in at the head of his men but leadership of the kind here suggested is of doubtful importance.

It is a relic of the days when whole armies were put to flight on the appearance of leaders who had a terrible reputation. Too few can see the leader. He is better placed where he can direct not lead his men.

(*e*) *You cannot fire to the front:*

It is hard to see how this party could have fired in any other way with at least a large proportion of its shots.

(*f*) *The revolver cannot be used in Shock Action:*

Hood charged at thirty yards, met a charging party of lancers and engaged with dismounted men. The physical collision of charging steeds probably belongs to the age of fable but for modern conditions this is a fair example of "Shock Action."

(*g*) *Shots fired while the horse is in motion are wasted:*

Hood's horses were in motion and as General Sheridan once remarked: "Let us see the list of killed and wounded."

(*h*) *Although useful in individual combat it is not so with a large command:*

The point to consider here is the conduct of seventeen men in a hand-to-hand fight and whether the experience of such an action would be a guide for a larger command in a bigger battle.

The hand-to-hand fight has characteristics which make it different from other forms of combat. Each man works by himself, looks to his own safety, picks his own opponent. Leadership and drill disappear.

It is hard to see why the seventeen individuals acting in this way should do differently from a hundred or more under similar conditions.

(*i*) *Other weapons would do just as well:*

It happened that the Indians set fire to piles of grass and were partially concealed in the brush and chaparral. It is hard to force a horse into burning grass and a long arm is needed to reach a man in a bunch of "Spanish bayonets." The pistol was equal to both of these conditions.

(*k*) *It is impracticable to train troopers in all their weapons:*

The men were enlisted in the summer and fall of 1855 and had less than two years service, half of which was in the field. Some were enlisted at McMinville, Tennessee, the home of the captain, but most were ordinary general service recruits enlisted all over the country. Target practice consisted principally in riding around a post and firing at it. The supply of ammunition was small. It was many years before target practice was developed in the army.

We cannot say how well the troopers used the other weapons.

The Mellay (Mêlée).

Formerly much was said about the hand-to-hand fight, the mix-up, the scrimmage, which was supposed to take place at the end of a bayonet attack, or a cavalry charge. Later observers of this feature of a battle have spoken lightly of it and have even doubted its existance.

Hohenlohe says that old soldiers told him that they came to blows not oftener than one time out of twelve. Moltke suggested that if reports of mellays were stripped of their dramatic splendor the prosaic truth would reveal a different story. Meckel says the mellay will seldom occur except when troops meet unexpectedly in an enclosed space and when the weaker cannot escape. Livermore says the loss of life in the mellay is insignificant. Solovieff saw many mellays but his statements are extravagant. These observers seem to be speaking of infantry mellays with the bayonet, of which Meckel seems to give the clearest view. But of all the men who have learned the secrets of the soldier's heart the greatest was Ardant du Picq. Speaking of cavalry he ridicules the mellay: declares that one side or the other always retires before the moment of actual contact: that at the most one mass would drive through another mass, and then break away, that in the mellays each soldier would instinctively watch for an attack in the rear and would dread it most.

Ardant du Picq was a Colonel in the French army, killed at Metz in 1870. His law of the mellay was that of European cavalry as it existed then and does today. If we can show a typical case of American cavalry in mellay we will settle an important point.

Ancient battles certainly were fought with hand weapons but the disciplined troops suffered practically nothing. The other side soon took to panic and rout and was slaughtered in great numbers. When neither side had disciplined troops the slaught took place in the army which was stricken first with the panic that was sure to come. This perhaps gave the idea to some historians that the ancient battles were heroic affairs. Recently, since the adoption of fire arms, we have been able to collect statistics of the losses due to the hand weapon, which could only be used in the mellay and we find them to be small.

Therefore, the accepted idea that the value of the charge is in its moral effect because the weaker side will not wait for the stronger.

Closely allied with the legendary and theoretical ideas of the mellay is the sentiment which awards great glory to troops who suffer the heaviest losses in battle. Close examination often shows that these losses were incurred not in the charge or in the mellay but in the retreat, that it is the effort to get away from the enemy when he has proved too powerful. In this respect the mobility of the cavalryman gives him peculiar advantages, which accounts for the relatively small losses of that arm in single actions. The loss that troops may be expected to stand in charge is relatively small. The army is merely a variety of the human crowd with all its ferocity, its heroism, and its self-forgetfulness but its stampedes are seldom to the front. So that the principal efforts of leaders has always been to get men to stop in hand-to-hand conflicts, and to combat the instinct of self-preservation. To overcome the nature of man artificial methods are used whenever possible and in this great soldiers have shown their highest genius and reached their most brilliant results. Fanaticism, patriotism, chivalry and glory, passion and prejudice, confidence and high example have each been walked upon the military check-board with varying result. Whenever the influence invoked was sufficiently original or strong on one side, that side has been victorious; when on both sides some form of mellay would occur if numbers, conditions and morale were equal on both sides. Typical instances are hard to find however.

From what has been said of the mellay and of battle losses it is safe to conclude that an example which shows an inferior force seeking a battle which they could avoid and staying under a heavy loss in killed and wounded will be unique. If we can wisely judge the whys and wherefores of the case we will illuminate a path that has often been ignorantly followed.

Devil's River has some claims for this distinction.

The losses that took place could not have occured in advance or retreat but only at close quarters. We know enough about the results of target practice to say that they occured at less than ten yards. As the loss of the Indians was greater than

Hood's entire force it did not occur in a moment of time. It was a mellay.

It is more difficult to answer the question as to the influences which impelled the troops to make a record for actions of this kind. On the side of the Indians it is plain that they could not avoid the conflict, except perhaps the mounted men. Indeed they had some confidence of numbers and advantage of position. The troops on the other hand were not broken by surprise or disturbed by the numbers and eagerly sought to get close to their enemies. Having superior mobility they used it to get close, not away. Under what absorbing influence did they act to break the law of the mellay? Religion, revenge and glory were not, we should say, highly developed in any bunch of careless troopers riding on a border scout in that day. The potent suggestion of Hood's example may have had a great effect at the beginning but probably individual leadership would not inspire sixteen men in that number of separate combats going on at the same time.

Plainly we must seek further for the power that lay behind that charge, and scrimmage and list of killed and wounded. As we have eliminated all factors but one of the human problem it is easy to find. What influence is expressed in the word "Confidence," and its principal manifestation was confidence in its weapons.

Many influences combined to build up an overwhelming sentiment in favor of the Colt's revolver. The regiment was new, it had not been ruined by peace maneuvers as Moltke suggested about the German Cavalry in 1870, or slaughtered by umpires, or discouraged by the bad results of target practice under hard conditions in time of peace. The revolver was new in the army but old in Texas. The Texas rangers and others had been using it for years and fabulous stories were told and believed about its deeds. A mettlesome crowd of officers were eager to show their powers. Bradfute, the Captain of "G" troop was a celebrated shot and a wild son of Bill Travis, the Texas hero, was an officer in the regiment, having formerly been a captain in the rangers. All thought was of quarters close and noses bloody. As a result Van Camp got an arrow through his heart, George H. Thomas had his chin neatly pinned to

his chest with an arrow as he leaned forward on his horse in a charge. Earl Van Dorn was shot twice and Fitz Lee once with arrows. Oakes had an arrow somewhere inside and he carried it all his life, and there were other cases of which we know not the details. All were hunting chances to show what was in them and Fitz Lee, Pfifer, Major, Harrison, "Shanks" Evans, Sergeant Spangler and Bugler Jack Hayes had a record of many Indians killed in personal combat.

So that is why I suggest that it is time to abandon some theories, to modify certain peace conditions, and to keep a pistol in the hands of the cavalry.

MILITARY HORSES IN GENERAL AND CAVALRY HORSES IN PARTICULAR.

By Captain ALBERT N. McCLURE, Fourth Cavalry.

WHAT is the best cavalry horse capable of carrying a weight of 260 pounds? First, his blood; second, his weight and height. The best cavalry horse is the one possessing in the highest degree the following qualities:

Ability to carry the weight prescribed, to gallop, to maintain a fair rate of speed for a long period of time, enough reserve energy at any moment to respond to a demand for great speed, easy and springy in his gaits, quick in his movements, docile and easy to control, and lastly, but of very great importance, he must be *very hardy*.

The answer to the above question, as it stands, is the product of a mixture of the two pure breeds, namely: the thoroughbred and the Arab, in such a way that the desired size and conformation will be produced. It is believed that the size should be an average of 15 hands, 2 inches, varying from 15 to 16 hands, and the weight between 1,000 and 1,200 pounds in good flesh.*

It is realized that the ideal cavalry horse is greatly superior to that which is ordinarily obtained. This answer is given be-

*Weight being so dependent upon the horse's condition of flesh, thin or fat, it can not be stated in exact figures what the weight of a cavalry horse should be. Nor is it important, since only blood, bone, muscle, conformation, soundness, condition of training, gaits and action determine the strength and endurance of the riding horse. Of course a fair proportion must exist between the weight of the horse and the weight he carries on his back, which should, in general, not exceed one-fourth of the horse's weight. In this connection it may be stated as also true, in general, that in exceeding about 1,350 pounds as the combined weight of horse and his pack, at the same time expecting to maintain great mobility and endurance, you pass beyond the possibilities of the horse. Big horses, very big horses, may be of value to a wholesale "Brewer's" association, or even to the "Jumping" horse-show faddists, but not so yet for the American cavalry.

cause it is believed that this horse possesses in the highest degree the essential qualities enumerated above that a cavalry horse should possess. It is evident that the horse possessing these qualities in the highest degree is the best cavalry horse.

The question appeals to the officers of American cavalry in this way:

What is the best cavalry horse that is practicable to produce in the United States? It is believed that in the starting of a breed of military horses only stallions of the thoroughbred race should be used, because there are fewer difficulties, defects we may say, to overcome in the thoroughbred as a cavalry horse than there are in any other race.

Thoroughbred stallions for the production of military horses should be:

First.—Absolutely free from all hereditary unsoundness or any predisposition toward it;

Second.—Of good conformation, with large bones, and strongly built;

Third.—From a good family, noted for their ability as good sires capable of reproducing themselves and of good dispositions.

The size of the stallion is entirely dependent upon the size of the mares at the disposition of the breeder.

The speed of the stallion or the purses he has won on the race track are of no importance. The mere fact that he is a clean thoroughbred is sufficient, provided all other requirements are fulfilled. It is important, however, that the young stallion destined for the stud should as a three year old *prove* his *soundness* and *endurance* by flat racing before entering the stud at four. This process may prevent some good stallions entering the stud, but it will probably keep more poor ones out than any other system.

The first and most important part to obtain in the machine of production is a sufficient number of suitable mares. From what source are the mares to come? The United States Government has recently acquired a numberof stallions of various breeds. If it is the intention of those in charge of this work to increase the number of horses in the United States among the farmers, thereby increasing the number of *mares*,

and increasing the reserve supply of horses or increasing the number of fair military horses that might be available in time of war, the trotters, the saddle horses and the Morgans among these stallions can undoubtedly be used to a great advantage. Mares should be selected that possess in the highest degree the essential qualities of a good cavalry horse, and in addition, can, be classed as good brood mares capable of producing the size and type desired. One can not say that these mares *must* be of any particular race, because one could not find a sufficient number of any one race alone to produce cavalry horses in great numbers. *Therefore, select mares from any race or family possessing in the highest degree the qualities desired in the product.* To say that the trotter or the Denmark or the Arab, or the pure thoroughbred in his present condition, is the best cavalry horse that it is practicable to obtain in the United States is only the expression of, in most cases, a selfish prejudice in favor of this or that breed.

Of course all animals selected for breeding purposes should be free from hereditary unsoundness, possess a good conformation for the work for which they are determined, possess a great deal of bone, and a good quality of tissue; *also, that an attempt should not be made to produce a radically different product in type and size from that of his ancestors.*

Let us see the result of the first crossing, i. e., the selected thoroughbred stallions with native mares. The first offspring will possess at least fifty per cent. thoroughbred blood. The mares produced in this way should be more valuable in the production of a good cavalry horse, provided the selection is properly made in the beginning, than their mothers, and will continue to improve as this system is carefully followed. At about the third generation in this system some stallions may be selected from the young family capable and worthy of entering the stud.

It is important to remember that the work that a horse does, the nature of the terrain over which he works, and his environments in time effect a wonderful influence on his conformation and disposition. This is one reason why the thoroughbred is the only horse worthy of becoming the foundation stone in the production of cavalry horses, because he, and the Arab—which will

be discussed in other notes—are the only pure races that have been used only as riding horses. While it is true that the American saddle horses and the trotters possess very much thoroughbred blood, and that the saddle horse is famous as a riding horse and a weight carrier—*or was thirty years ago*—it remains true that both of these horses, as a race are, at the present time far from being ideal cavalry horses. The character of the work that they have done for generations has made them so, in bringing about serious defects in conformation for cavalry purposes.

The environments of both stallions and mares employed in this factory—if we may call it such—should, as far as practicable, be the same as that of the cavalry horse in actual service. Mares should not be left at liberty is a semi-state of savagery, on flat prairies while in foal, but they should be employed in light work of any kind, preferably in light riding over varied terrain and daily accustomed to being handled. Therefore, the small farmer, who has a small number, often only one, of such mares in his possession, should be the real horse raiser to seek in looking for suitable mares and suitable mothers for cavalry horses. Likewise the stallions, except during the two or three months of the year while making the season, should be ridden, preferably in a school of equitation, because *their daily exercise is very necessary*, and if the stallion depot is near a school of equitation or military garrison, such horses could be profitably and economically used.

Much could be said as to the climate and character of the soil and nature of the terrain that produce the best military horse. The French consider this of such importance that they have certain sections of the country for the young foals while being nourished largely by their mothers' milk, and later, during the period of growth, other districts more elevated, more mountainous, where the vegetation is less luxuriant which the French claim is very essential in producing a good quality of tissue. In Hungary, where the important studs are located in perfectly flat country, it is possibly true that their horses have reached the highest perfection possible to obtain where the studs are located. These horses do not have the appearance of being clever mountain climbers or clever in rough country

because for many generations they have never performed that kind of work. Let us hope that in the selection of the remount stations, and the districts where government stallions have been placed to make a season, that this subject has been given due consideration. This is also important because the character of the soil and the quality of the grass and other forage, whether natural or cultivated, will have a great influence not only upon the quality of tissue, of bone and muscle, but the character of the surface of the ground, whether rocky or sandy, whether wet or soft, or dry and hard, a very important influence on the size, shape and quality of the feet, and probably, under certain conditions, the climate may exert a wonderful influence toward or for a predisposition to hereditary ailments of the eyes. A good horseshoer can not put good feet on horses. They must be grown on him.

When the small farmer of the United States becomes thoroughly familiar with what a good military horse should be, there is no doubt but he will be glad to have an opportunity to produce them, because the farmer is sure to learn in a short time that the good military horse is far superior to anything he now has for his own work.

The foregoing being a brief description of what troop horses should be, and how they should be obtained, what is the best officer's charger or officer's horse? The answer is: The best of the above type. Why should he be larger, or why should be he of a different blood, or why should an officer have a so-called "*war horse*," and a "*peace horse*" or "*charger?*" For an officer's war horse certainly nothing better can be found than the best of the class described above. In time of peace, perhaps, the officer might be permitted to ride any kind of horse that he may select, but in peace or war the officer's horse should be a model *in performance and endurance.*

In this brief paper it can not be undertaken to discuss the relative merits of the thoroughbred, or of the trotters, or of the American saddle horses, of the Arabs, or the Morgans, or the cow ponies, as good cavalry horses. Experience alone in riding all these classes can lead one to correct conclusions in the matter. This is true, the large, broad, heavy horse, no matter how well

bred he is, seldom has the springy, light, elastic movement of the smaller or medium-sized horse.*

As an indirect means of quickly and surely improving the quality of the military horses, what part should the federal government play in supporting this system which will undoubtedly prove a valuable asset in the national defense, i. e., by greatly increasing the number of horses in the country capable of rendering military service. A good system has been started and we are happy to find along the general line outlined above. It is up to all who are interested to assist.

The age at which young horses destined for military service should be purchased and placed under military control is a minor detail to be determined only by the cost in doing it. It is important, however, that before full military duty is required of them they should be at least six years of age, and should have had at least one year's careful training.

It is of no importance how the stallions are obtained to place at the disposition of the breeders, whether the government maintains a stud to raise them or whether they are purchased in open market. The only point is, they should be available and their selection and assignment to districts carefully made. *Mistakes made in the beginning will require years to correct.* It is necessary for the government to control this enterprise of such vast national importance because only a few states have breeding laws by which unfit material may be kept out of studs.

Can not the federal government, in some way, probably through the influence of the Bureau of Animal Industry, assist State Legislatures in a law such as that which Pennsylvania and one or two other States have for prohibiting a license to be issued for stallions possessing serious unsoundness and defects in conformation?

Is it surprising to know that one European country (Hungary), by a well organized system of horsebreeding is able to sell

*Easy, springy gaits are a quality of a riding horse as desirable to those persons of the military service who ride horseback as a vocation as it is to men of any other profession. Men who ride horseback for a living have never in the history of the United States selected large horses for that purpose; neither have they selected horses with rough gaits.

annually about sixty thousand horses to its neighboring states largely for military purposes? Of course the best are retained in the country. Think what an industry this is for that country. Probably no country in the world can today turn out more horses capable of rendering excellent military service than Hungary.

How many first class military horses can be found in the United States today? How many horses is the United States selling annually to foreign countries for military purposes? How many is it practicable for the United States to profitably produce annually in addition to its requirements for the army in time of peace? These are pertinent questions worthy of serious consideration.

SUMMARY.

The best cavalry horse capable of carrying a weight of 260 pounds practicable to produce in the United States is obtained by crossing of the carefully selected thoroughbred stallions with native mares, both stallions and mares selected for their good qualities as breeders and possessing to the highest possible degree the essential qualities of a good cavalry horse; height, from 15 to 16 hands, average 15½; weight, 1,000 to 1,200 pounds. The best officers' charger is the best of the above classes.

THE SCHOOL OF APPLICATION FOR CAVALRY AT STRÖMSHOLM, SWEDEN.

By Captain GUY CUSHMAN, Eleventh Cavalry, Military Attaché.

IN compliance with an invitation received from the Swedish War Department to attend the graduation exercises of the class of 1912-13, at the School of Application for Cavalry at Strömsholm, in company with the Austrian Military Attaché, Colonel Straub, I left Stockholm at 6:15 on the evening of August 8, 1913.

After leaving the city, our route lay through rich farming country, which reminded me greatly of our own farms at home, particularly in the neighborhood of Burlington, Vermont. The general route of the train was along the shores of beautiful Lake Mälar, one of the largest of the many Swedish lakes. Passing through the large towns of Enköping and Vesteras we arrived at Strömsholm at 9:30, and were met by two of the officers detailed to the School as Instructors. We were taken by these gentlemen to the quarters of Major Ernest Linder, Royal Life Guards, Commandant, where we were most hospitably received by Madame Linder and her charming daughters.

The Commandant at Strömsholm does not occupy regular quarters, but resides in a large country house about half a mile from the Castle of Strömsholm. As Major Linder and all his family speak English perfectly it added greatly to the pleasure of my visit, as I had not been in Sweden long enough to acquire a speaking knowledge of this very difficult language.

We had been informed that our visit would coincide with the annual inspection by the Inspector of Cavalry, Major General Nyblaeus, and our hostess informed us that the general was at that moment at the castle of Strömsholm, attending a lecture by Major Linder on riding and jumping. The "General Inspector" was not, I noted, a guest of the Commandant, but spent the night in the castle with the student officers.

Upon inquiry I was informed that in Sweden the inspecting officer was never the guest of the commanding officer if it could be avoided. I regretted that we were too late to attend Major Linders talk on equitation, for while I could not have understood a word that he said, his remarks were illustrated with the cinematograph showing various incidents at horse shows and steeplechases in different foreign countries, also views taken at Saumur, Hanover, Tor di Quinto, and other cavalry schools which must have been of great interest.

Our host came in shortly and gave us a warm welcome to Strömsholm. Major Linder is a tall, spare man, and looks like a perfect type of a cavalry officer; he speaks English, French and German fluently and has twice been detailed as Military Attaché, to England and to France.

CLASS MOUNTED ON PRIVATE CHARGERS. RIDING HALL AND STABLES IN REAR.

Saturday morning we were up at 6:30 and after a hasty breakfast we were off in Major Linders automobile to the Castle of Strömsholm. This castle, it is really more of a chateau than a castle, was built by Charles X of Sweden, in 1620, and was for many years his home, and was the birthplace of the famous Swedish King and General, Charles XII. It stands upon an island in a rapid river, and is approached by a long avenue of ancient trees and an iron bridge.

Strömsholm is the property of the Crown, but as it is not needed for a royal residence it has for a number of years been in use for quarters for the bachelor instructors and student officers of the school. It is a beautiful and picturesque old building, but seemed in bad repair, and the sanitary arrangements (as in

most old castles) were beyond description. Also it must have been very cold in winter, as there are only porcelain stoves for heating apparatus. The Swedish Government evidently does not believe in pampering its young officers, and I must say that they seemed a remarkably fit and hardy lot of youngsters. The castle is located over two miles from the stables and riding hall. While this distance does not make much difference in summer as the students all ride bicycles to and from the stables, it must be rather inconvenient in winter when the snow is deep.

At the Castle we met General Nyblaeus and his Adjutant, Major Stöhl of the General Staff, and, as Colonel Straub and myself were already acquainted with the General, introductions were unnecessary. The General welcomed us heartily and very kindly took us over the castle and told us a good deal of its history. After which, mounting the horses which were awaiting us in front of the castle, the Inspector proceeded to the business of the day, which was first the inspection of the graduating class mounted upon their personal chargers.

When an officer is detailed to take the course at Strömsholm he brings with him all the horses he owns. In Sweden all cavalry officers are required to keep two mounts, but most of them have more. Over two hours were spent in this manner and when the Inspector finished, there was no doubt in my mind and I am sure there was none in his, that these horses were in every way "made" chargers. I have seen some close inspections at home by various of our Inspectors and regimental commanders, but never before have I seen an inspection so thorough and comprehensive as General Nyblaeus made of the class and their mounts at Strömsholm.

In detail, the inspection covered the same class of work as we see at our Mounted Service School at Fort Riley, and consisted of movements at the different gaits, walk, slow trot, fast trot, and gallop; turning on the forehand and haunches, backing, change of leads on circle and straight line, "shoulder in" and work on two tracks. These horses were all well bred, and a good proportion of them were thoroughbreds, but they were all perfectly steady and quiet and all jumped freely and without hestitation any obstacle at which they were put.

After having completed his inspection of officers chargers, the general invited us to accompany him in a motor to inspect the remount depot, which is located about two miles from the castle and is under the charge of a major of cavalry.

There are about four hundred horses kept at the depot, two hundred of which are three year olds and two hundred four year olds. These young horses are bought by a Commission of cavalry officers when they are three-year-olds. They are

SWEDISH OFFICER JUMPING. SCHOOL IN REAR.

bought in the spring and remain at the remount depot about sixteen or eighteen months. These horses, while they seemed to me to be rather undersized, showed good breeding and seemed to be quiet and docile.

Depending upon the size of the class at the School of Application as many as possible of these horses are trained yearly by the student officers, the horses being trained for two years, before being sent to their regiments.

These horses cost the Government from 500 to 1,000 kronor each, or from $150 to $375. Occasionally more is paid for an extra good "prospect." Swedish officers have told me that there are not as many good horses bred in Sweden as formerly. This they ascribe to the advent of automobiles, and prohibition on gambling at the races in Sweden. This fact seems worthy of note.

I could not imagine any more perfect location for a cavalry school than Strömsholm. The country for miles about the castle is level and covered with a fine, strong turf. This plain is wooded by "islands" of ancient oak and birch trees, which afford plenty of shade in summer, and "breaks" against the cold north wind during winter work. Jumps and obstacles of every description are scattered over this terrain, and what struck me particularly is that all the Swedish jumps are built without wings.

Returning from the remount depot to the inspection ground, we again met the class who had in the meantime changed horses. These, we were informed, were called "the one year horses." Every year the Royal Swedish Horseguards and the Lifeguard Dragoons (both regiments stationed in Stockholm) send to the school thirteen young untrained horses each. These twenty-six horses are then trained by the student officers for two years, when they are returned to their regiments. The horses we now saw had been under training for one year and seemed perfectly quiet and under good control at the various gaits and movements, and jumped a portion of the steeplechase course well and steadily.

This inspection took the General until 11:00 o'clock at which time we returned to the castle, and had lunch with the student officers in the mess hall of the castle, which is separate from the main building. General Nyblaeus is a keen student of cavalry, and during the course of the luncheon he asked me many questions concerning our service. The luncheon was not a formal affair, and was the usual one that the students have, no beer or liquors were in evidence, the beverages being milk, tea and coffee.

At half past twelve a large "drag," drawn by four perfectly matched chestnut stallions, drove up and our hosts informed

us we were to go to the school stables and witness another ride by the student officers.

As previously noted, the stables, riding hall, etc., are located about two miles from the castle, and when we arrived at the stables we found the class assembled and mounted on their "number two" private horses.

The inspector first went through the class and inspected them minutely, apparently examining the condition of the horses and the cleanliness of each officers equipment. I followed the inspector along the line and noted that, in every case, the curb chains were very tight, in fact so much so that it was impossible to put a finger under them.

The riding was very much the same thing we had seen in the morning except that the General gave several of the student officers what I thought was a decidely thorough oral examination, to demonstrate that not only could they perform the required movements themselves, but that they were qualified to instruct others.

While the General was occupied with his oral examination, I was shown the school stables by Lieutenant Rosencrantz, one of the instructors. The stables are models, quite the best I have ever seen anywhere. The stable that I saw held, I should say, about one hundred and fifty horses. It was a frame building with two rows of separate stalls, one on each side, horses facing out. This is a good idea which we should adopt. The old swinging bar in our double stalls has injured more horses, and lost the Government more money than the partly saving of a few hundred dollars in lumber saved by ont having a partition.

The floor was cement and covered with fresh sawdust to a depth of two inches. This is kept neatly swept up by the stable "police," leaving a path on each side between the edge of the sawdust and the heel posts. Stall floors were of dirt, the horses were bedded above their knees in perfectly clean rye straw. The bedding was much more abundant and of a better q uality than I have ever seen in any troop stables in our service This is accomplished by having two men on duty as stable police at all times, to remove manure droppings immediately. By this method manure is not trodden into straw, soiling it

and causing great wastage. There was no perceptible odor of any kind in the stables. During the summer months flies are a veritable pest at Strömsholm, but I noticed that in these stables there were very few flies bothering the horses. Bunches of green leaves were hung from the roof the entire length of the stables about every ten feet, three bunches in a row across the stables. I noticed that large numbers of flies were "roosting" in these leaves and did not seem to want to leave them. In addition to this, above every other stall there was suspended a strip of sticky fly paper hung from the rafters, and all of these I noticed were black with flies. The horses all had light linen sheets over them, and seemed very quiet, and not stamping and fidgeting as our horses do in our stables in summer. I think that we might well copy this plan, as it would be without expense excepting a small sum for the sticky fly ribbon, which would be amply paid for by the increased comfort and resulting condition of our horses in summer.

Every horse's grooming kit is hung on the heel post, and there were platted straw mats on the floor and hung above the stalls. Every horse's name, with that of his owner, hung over the stall, his breeding (the horse's) was given if a thoroughbred, and a list of prizes if any that he had won. These stables were much lighter than ours; big windows four by four feet over every stall, those on the south side had bluing on the glass to subdue the sunlight.

Leaving the stables I found that the General had completed his inspection and that we were to drive to Lake Mälar to see the swimming exercises. On the way to the lake we were informed that we should witness the descent, by the class, of a steep bank, "quite as the Italians do at Tor di Quinto" our hosts told us. Before arriving at the lake we stopped at a large semi-circular gravel pit on the right of the road. This pit was quite a hundred feet in depth and a hundred yards in diameter. At the top, in most places, it was very precipitous—in many places perpendicular for six or eight feet down—and in all places rocks and sand to the bottom, at an angle of 45 degrees. As we approached on the road the class appeared above, along the top of the pit, some on their chargers and some on remount horses. They ranged themselves around the top of the pit

and at a word from the instructor they all rode calmly over the edge and descended, I had better say slid, to the bottom. Not a horse nor a man fell; where the sand was loose the horse quietly sat down and slid with it, sometimes half buried, but without the slightest trace of nervousness—where it was rocky they picked their way like cats. I noticed two horses get among rolling stones and, instead of going crazy, they sat down on

DESCENT OF STEEP BANK BY CLASS. AT SEVERAL PLACES THIS BANK WAS PERPENDICULAR FOR FIVE OR SIX FEET.

their tails and slid until they struck sand. It was as pretty a maneuver and as prettily executed as I have ever seen.

Arrived at the shore of Lake Mälar, on a good beach, the student officers demonstrated their ability to take care of themselves and their mounts in the water under all conditions. Different methods of teaching horses to swim were shown, an

officer in the stern of a rowboat led his horse into the water with a cavesson and longe, then two horses thus equipped were swum side by side. All the horses were required to swim around a buoy about a hundred yards from shore.

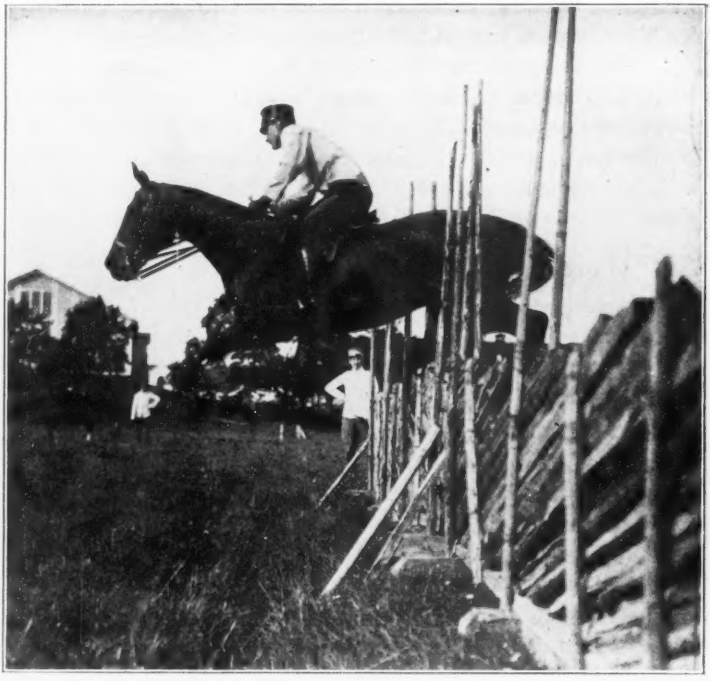
The officers swam their horses without saddles and with them; without clothing on and in full uniform; equipped for the field in heavy marching order; and part of the class, without clothing on, swam the arm of the lake at that point over a half a mile wide. Every horse I saw entered the water freely, without fear or hesitation, and really seemed to enjoy the exercise.

I take off my hat to the Swedish cavalry officer. He certainly can ride and ride well, and, while Sweden has not a great deal of cavalry, her mounted officers have made the most of their opportunities and I think will rank individually as high in horsemanship as any officers in Europe. I cannot say that I admire the appearance of the Swedish seat as taught at Strömsholm, but it seems to get the results they desire. Neither can I understand how, in bitting their horses as severely as they do they can avoid toughening and deadening their mouths, but, one and all, they swear by the tight curb chain.

Driving back to the school at the conclusion of the swimming exercises, we were shown the Royal Stallion Depot. There were, at the time of my visit, about one hundred and thirty stallions at the depot. These stallions are standing all over Sweden in the country districts, and are brought into the depot during the summer. I saw all classes of stallions for all kinds of work, from the heavy farm horse to the thoroughbred. I was struck by the quiteness and gentleness of these animals. They stood, side by side, in ordinary stalls with low partitions, as quitely as geldings would have done. Some of the thoroughbred stallions were in large airy box stalls, and among the latter I noticed a son of the famous English horse "Isinglass" and a son of "Saint Frusquin." These stallions are available for use by the farmers at the nominal fee of 20 kronors, or $5.50, this of course for the thoroughbreds to approved mares. I was struck with the extreme cleanliness with which these stables are kept as well as those at the school.

This inspection concluded the work of the General for the day, and that evening the Commandant entertained at a large and formal dinner in honor of the Inspector General and the visiting Military Attachés.

On Sunday morning we were in the saddle and on the way to the steeplechase course at 7.30. The General explained that, as it was Sunday, and as there were to be races in the afternoon,



OVER A SWEEDISH FENCE.

that this would be a short inspection. When we arrived on the ground we were met by the class mounted on the "second year" remounts, that is, the twenty-six horses that had been sent by the two cavalry regiments stationed in Stockholm, the "Life Horse Guards" and the "Life Dragoons." The Inspector gave them the closest inspection of all and it lasted from 8:00 o'clock until 10:30. I wish to impress on the reader that these

horses were not going back to the regiment to be used for officer's mounts, but to be assigned to troops for the use of the private and "non-coms," and right here I wish to say that I have never seen quiter or steadier horses in my life, and the Inspector required them to do anything that came into his head to prove it.

The first test was the ordinary riding school training, gait, walk, slow trot, fast trot and gallop; turnings on forehand and haunches, backing, shoulder in, work on two tracks, changing leads on straight line, in fact all the regular school work.

Then followed various tests to show the willingness of the individual horse to leave ranks under any circumstances. They were required to leave ranks to the front, to the rear and by the flanks, and at all gaits, and the Inspector satisfied himself that not only *some* of them would do it but that each and every horse would. Then followed a close order drill in two platoons in single rank, most of the movements being simple and consisting mainly in following in trace at the different gaits. The students then had to show the Inspector that their mounts were steady under fire and riot conditions. The horses were brought together in a bunch and carbines were fired in among them, from their backs, and from the ground under their bellies; while at a halt they were charged by a lot of dismounted men shouting and firing their rifles. Not a horse moved or showed the least sign of nervousness during the entire performance. They were then ridden at a walk through a line of skirmishers lying on the ground firing One or two horses only were observed to even toss their heads. They were required to charge directly at, and into, a dense mass of woods, in which a line of skirmishers was concealed and firing rapidly. The exercise included cutting at heads and at dummies on the ground, and finally, when we thought that the Inspector had certainly seen all there was to see in these particular horses, we started out on the road in column of trooper and we went in this formation for nearly two miles. The Inspector would ride along the line and when he came to what seemed a particularly nasty obstacle bounding the road he would say to the officer nearest him: "Take your horse over that and return." The officer designated would leave the column by the flank, jump whatever obstacle he found in front of him and regain the column by jumping

back into the road again. Stone walls, banks, post and rail and gates bordered the highway, and the only class of obstacles that was not jumped was wire.

Arriving in the vicinity of the school stables, the student officers, not having jumped enough in the mind of the Inspector, had to take their horses twice around the course of the "Stockholm" jumps. During the whole performance I only saw one horse refuse and he jumped the obstacle at the second attempt.

A DIFFICULT STUNT. JUMP OVER FENCE AND DITCH AND ON TO STEEP BANK.

When at 10:30 the Inspector announced that he was satisfied, I for one certainly agreed with him, and I told him that I wished that I had twenty-six such horses in my own troop. To which he replied: "You can easily do so if you take them young, at four years, and then take the trouble."

The steeplechases which were the final event of the school year were scheduled to start at 2:00 P. M., and in the meantime we returned to Major Linder's to a delicious buffet luncheon. A number of Swedish cavalry officers, former graduates of the school, had arrived from Stockholm to spend the day and witness

the races, and prominent people from all over the provinces had arrived in motors and carriages, for these races are one of the events of the summer, and so we were a very gay party.

It was a perfect day and the smart toilettes of the ladies with bright uniforms of the different regiments made a very pretty picture as we dismounted from the school "drag" at the paddock.

The Strömsholm steeplechase course is a decidedly stiff one from the riders point of view. The jumps are big and the course is quite a difficult one to follow, I should say, for a rider who did not know it thoroughly, for it winds about among the clumps of trees in quite an intricate manner. For this same reason it is marred for the spectator, for one has to run from point to point to get a view of the race, except just at the "stretch" and the finish.

There was a large attendance, the farmers and people from the nearby towns coming in large numbers. I estimated that there were at least three thousand people present.

The races themselves were excellent. There were six races, all steeplechases, with from four to ten entries in each race. They varied in length from 2,500 to 3,500 meters. There is no public betting allowed in Sweden so the student officers had a small book arranged among themselves.

After the last race Madame Linder, the charming wife of the Commandant, distributed to the young officers the cups that they had won in the various events also the prizes for excellence in horsemanship that had been won during the year. We then returned to the castle for the big event of the year, looked forward to by every student officer and instructor, the graduation dinner. Unlike our graduation "affairs" this was not a "stag" dinner and some hundred officers and ladies sat down to it. I may also state that it was a "grape juice" dinner, but in this case the juice was fermented and I saw a good deal of it labelled "Möet & Chandon." Unfortunatley an uncompromising railway schedule forced Colonel Straub and myself to leave before this very delightful affair was over, and we reluctantly bade adieu to our hosts and departed, carrying with us recollections of charming hospitality and an interesting experience that I trust will be long in passing from our memories.

THE CAVALRY COLUMN FROM HARPER'S FERRY IN THE ANTIETAM CAMPAIGN.

By Captain I. W. HEYSINGER, M. A., M. D., M. O. L. L. U. S.

There are several reasons for endeavoring to present in detail the operations of the Union Cavalry in their expedition, and all-night ride, from Harper's Ferry to Greencastle, in Pennsylvania, on the night of September 14-15, 1862, which former place was surrendered on the morning of September 15th.

In the first place, those who have written of these operations were ignorant of the topography and the highways of this region, which they passed during a night of intense darkness, up to three o'clock in the morning, and over unknown roads, and where there were no roads, to an unknown destination; so that, however desirous these writers may have been, it was impossible for them to have described the route. In the second place, no official reports of this expedition were ever made, because the expedition was composed of a number of disconnected cavalry organizations, forced by outside pressure into Harper's Ferry from all points of the compass; never brought into a single body at Harper's Ferry; and which were brought together into one compact column for this night alone, and were immediately afterwards separated into other organizations after reaching Pennsylvania, which was substantially coincident with the operations immediately preceding, during and subsequent to the battle of Antietam; while the commanding officer at Harper's Ferry was killed the next morning, September 15th, at Harper's Ferry, and a subordinate officer, not concerned with this expedition, took his place, and, with him, all the Harper's Ferry garrison were surrendered prisoners of war, paroled, and sent adrift, also, to all points of the compass.

The proceedings of the Harper's Ferry Military commission, narrated in the War Records, Vol. XIX, Part 1, were not

for the purpose of establishing the route or operations of the cavalry expedition, but to determine, if possible, the responsibility for the surrender of Harper's Ferry, and only so far as the departure of the cavalry from that garrison the night before the surrender was concerned, did the cavalry properly figure.

Brigadier General Julius White, who succeeded to the command, when Colonel Miles was mortally wounded on the morning of September 15th, in his report dated September 22d, says:

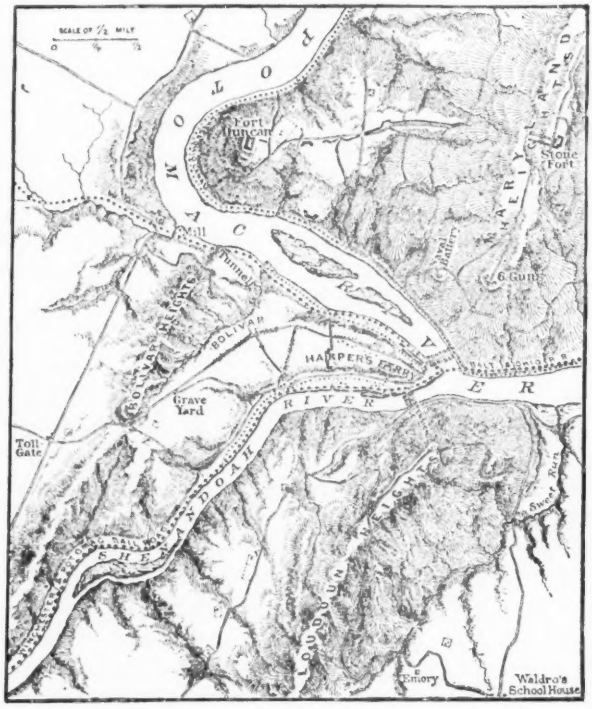
"In the evening (of September 14th) the entire cavalry force consisting of the Twelfth Illinois, the Eighth New York, the Seventh Squadron Rhode Island Cavalry, and two companies of the First Maryland, were ordered to cross the Potomac, upon the pontoon bridge, taking the road in the direction of Sharpsburg, to cut their way out if possible, there being no forage, and they being useless in the defense of the place. Under an experienced guide, they succeeded in so doing, and captured a portion of General Longstreet's ammunition train and some prisoners on the way."

The above is the only official report which I have been able to discover, and that not by one connected with the expedition, so that I think that it will be agreed that the "Escape from Harper's Ferry" is a misnomer. I am sure that no one in the expedition so considered it, on starting, and certainly not during its continuance, or after its results. As one of the officers, while directing the men, before starting the column, described it, it was to be "McClellan or Hell." He also gave notice (as it was a matter of volunteering) that anyone doubtful of the event was at liberty to quitely drop out, and nothing would be said. A few did so, but none that I personally knew.

It is true that I was only a corporal at the time in a New England student company, but I afterwards served through successive grades up to that of captain, until November, 1865. I was born near by; my relatives lived all round our route, and I was familiar from boyhood with every road, path, plain and mountain, as anyone could be who had grown up, hunted, fished, visited, went swimming, and did all the things that boys do when left to their own devices, so to speak, among scenes as vivid today and as well remembered, and as much beloved, as

they were on that night. I suppose that no one in that cavalry column, but the writer, knew every mile we traversed, and all the mills, creeks, villages, and even farms, woods, fields and dwellings, for many miles around, by night or day, for in both I was equally at home.

In the third place no one knew the route we were to follow, and if anyone had known it beforehand, it would have, with its constant changes, turned out to be an altogether different way; and the same is true of our destination.



MAP OF THE DEFENSES AND APPROACHES OF HARPER'S FERRY.

Reproduced from "Battles and Leaders of the Civil War."

In the fourth place, while, on September 12th, when Harper's Ferry, (at the bottom of a topographical soup-tureen), was sealed up on every side by a hundred Confererate regiments,

with all their artillery, under such splendid generals as McLaws, Anderson, Walker, Stonewall Jackson, Ewell and A. P. Hill, that post was then, when too late by days, placed under the command of General McClellan, when it was impossible for that officer to learn anything about us, or for us to learn anything about him. All we knew was that during Sunday, the 14th, we heard the roar of the guns from the battle of South Mountain,* and from Pleasant Valley and Crampton's Gap, and that of the Confederate artillery as well, during the whole afternoon, firing upon Harper's Ferry from Maryland Heights across the Potomac on the north and northwest, from Loudon Heights across the Shenandoah, on the east and southeast, and from Bolivar Heights on the south and southwest, across the angle from one river to the other. All of their batteries were hundreds of feet higher than our own ground, and within short and easy range; and that to leave Harper's Ferry at all, in any direction, was merely to choose which particular sort of enemy we would have to force our way through.

McClellan knew nothing of our expedition, and we nothing of where he might be, for we knew nothing of the events of the South Mountain or Crampton's Gap battles, nor of who was attacking, or who was attacked, or who was succeeding or who failed.

In the fifth place, through a series of most remarkable coincidences, totally unexpected and the significance of which no one at the time could have perceived, and by a similar series of conincidences on the part of the Confederates, all the way from the pontoon at Harper's Ferry for fifty miles clear up to the Pennsylvania line, the expedition resulted in the most profound effects on the battle of Antietam, and probably on the subsequent course of the war. The capture of two-thirds of all of Longstreet's ammunition largely paralyzed his work on the left of Lee's army during the battle, and probably prevented the attempted flank movement around the right of our own army, during the afternoon of the 17th, as I shall describe later on, on competent authorities.

The result in other words, was akin to that of the destruction in the fall of the same year, of General Grant's main supply

*At Turner's Gap.

station, at Holly Springs, in Mississippi, while Grant with a great army was pushing down by land, to Jackson Mississippi, to take Vicksburg from the rear, in December, 1862, similar in results to the Confederates, as ours was to the Federals.

The Confederate General, Earl Van Dorn, in conjunction with the operations of General Forrest, had passed by Grant's flank far down south of Oxford, Mississippi, and struck Holly Springs in Grant's rear, December 20, 1862, at daylight, with the following results, from Confederate reports, and authenticated by Grant's own.

"I surprised the enemy at this place at daylight this morning; burned up all the quartermaster's stores * * * burned up many trains; took a great many arms, and about 1,500 prisoners. I presume the value of the stores would amount to $1,500,000."

I myself was at Holly Springs a year later, and certainly it was then a scene of desolation, with evidence of vast destruction all around. For this, the Union commander at Holly Springs was dismissed from the service.

General McPherson writes, December 20, 1862: "I am apprehensive that the cavalry dash into Holly Springs has been a pretty serious affair for us. An order will be sent to your command (from Grant), putting your troops on three-quarters rations; I shall do the same for the whole of my command."

General Grant reported to Washington, December 25, 1862, that the loss at Holly Springs "will probably amount to $400,000, and 1,500 prisoners." He fell back to the line of the Tallahatchie River, "with the road strongly guarded to the rear, waiting for communication to be opened, to know what move next to make. It is perfectly impracticable to go further south by this route, depending on the road for supplies, and the country does not afford them."

December 21st, General McPherson ordered his whole command back to Oxford, Mississippi.

General Grant writes, December 23d: "Raids made upon my rear by Forrest northward from Jackson, and by Van Dorn northward from the Tallahatchie, have cut me off from supplies, so that further advance by this route is perfectly impracticable." In fact, the whole campaign was abandoned and lost.

General Halleck, December 27th, sends a dispatch to General Hurlbut: "Memphis must be held at all hazards."

Of course these events and results differ from those of the cavalry expedition from Harper's Ferry, in that the operations of Forrest and Van Dorn were systematically undertaken and carried out, but they show what enormous effects can be produced upon an army apparently out of reach, and its whole campaign destroyed by cavalry forces totally inadequate to produce such results by any direct attack. These were "riding-around" indeed, while Stuart's, in the east, were simply "show-pieces," and did no damage excepting to his own horses, and his army's communications. But then General Stuart was not General Forrest.

An operation bearing considerable resemblance to the cavalry expedition from Harper's Ferry, in the total ignorance of both the contending armies, but on a more extended scale, and with results which led directly to the capture of the British army at Yorktown, and the triumphant end of the war of the Revolution, may be found in the campaign of King's Mountain, in 1780, which is told vividly and delightfully in President Roosevelt's "Episodes from the Winning of the West," so as to have become a classic.

The strange apparition of these mounted mountaineers, emerging from the valleys and through the passes of the Alleghenies and Blue Ridge, and pouring down to attack the unsuspecting Britons, utterly unknown to them, as well as to Washington or to any other commanders on either side, crushing, destroying or capturing the enemy, and then, with the same suddenness, pouring back beyond the mountains again to fight the Indians. This left only bewilderment behind, and opened the gates of Virginia to success, saving Georgia, the Carolinas and Virginia to the Continentals, and finally showing its momentous results in the freeing of our country from British invasion. This has a strong analogy with the operations of the cavalry upon Longstreet's trains, and their reporting to McClellan. In both cases, apparently, coming up from the earth or down from the skies, and then disappearing again as an organization. It certainly affords an interesting parallel as illustrating one telling phase of the accidents of war.

In the sixth place, then, this narrative of mine, with its details, seems to me to be justified, because it is based on both Union and Confederate documents and reports. Also because it is written by one born and raised on the borders of Pennsylvania nearby, whose brothers, uncles and other relatives were residents of Boonsborough, Clearsprings, Williamsport, and other places in the same area, and who was well acquainted with all the roads, mountains, creeks, rivers, and topography from his childhood up, and who was a roamer during his vacations, (and often at other times), over all this region, up to the time when the events herein described had occured; and often since. So that all this makes it desirable that one so familiar by night and day, with these scenes, in which he was an actor, should correlate the various data into a comprehensible and authentic narrative of this strange, unforseen, and unexpected, as well as important, minor act of the War of the Rebellion.

Regarding the available evidence as to the number of troops which constituted this cavalry expedition, the official data, (War Records, Vol. XIX, Part 1), are as follows:

General Wood's report, September 27, 1862, says (p. 519): "1,500 cavalry were ordered to leave before the surrender."

Aide-de-camp Binney's report, September 18, 1862 (p. 537): "Rhode Island and Maryland cavalry, 400."

From the testimony taken before the Military Commission (same volume, p. 583): "There were nearly 2,500 cavalry (at Harper's Ferry)." Lieutenant Binney, aide-de-camp.

The official return of casualties at Harper's Ferry (before the departure of the expedition), page 549, gives the cavalry losses as 274.

Aide-de-camp Binney, (p. 591), says again: "We had about 11,500 men, exclusive of cavalry, we had nearly 15,000 men including cavalry." The dispatch of Colonel Voss, the Commander of the Expedition, to General Halleck, from Greencastle, Pennsylvania, September 15, 1862 (p. 758), says: "I left last evening at 8:00 o'clock, with the cavalry, about 1,500 strong."

The chief of Ordnance reports requisition for 600 Sharp's carbines with accoutrements, September 3d, for the 8th New York cavalry (p. 760).

Page 778, Colonel Ford is cited, saying that he had about 275 cavalry on Maryland Heights, up to September 12th.

General Wool's testimony before the Military Commission, (p. 791), says: "Colonel Miles had 13,000 there at first, but he sent away 1,500 cavalry."

Regarding the topography and defensiveness of Harper's Ferry, General Julius White testified before the Military Commission (p. 717), as follows:

"I regard Harper's Ferry as a very weak position instead of a strong one. The popular idea that it is a strong one is a fallacy. The three commanding positions about it, Maryland Heights, Loudon Heights, and Bolivar Heights, either of them being above it, either of them being possessed by the enemy, Harper's Ferry is commanded by them, and each command on these positions necessary for the defense of Harpers' Ferry is necessarily detached from the others, not within supporting distance by the others, on account of the great natural barriers offered by the Potomac and Shenandoah; and during an engagement it is not practicable to support one position by the forces at another."

General McClellan telegraphed to Halleck, at Washington, September 10th (11th), "Colonel Miles is at or near Harper's Ferry, as I understand, with 9,000 troops. He can do nothing where he is, but could be of great service if ordered to join me by the most practicable route."

In General R. E. Lee's report, he says: "It has been supposed that the advance upon Fredericktown would lead to the evacuation of Martinsburg and Harper's Ferry, thus opening the line of communication through the valley. This not having occured, it became necessary to dislodge the enemy from these positions before concentratiny the army west of the mountains."

General John E. Wool, in whose command Harper's Ferry then was, telegraphs Colonel Miles, September 5th: "You will not abandon Harper's Ferry without defending it to the last extremity."

And on September 11, 1862, General Wool telegraphs Governor Pierpont, at Wheeling: "I would not under the present uncertain state of affairs, feel justified in removing from Harper's Ferry or Martinsburg any of the forces stationed there."

September 12th, (as elsewhere stated), but too late, Harper's Ferry and its garrison were put under the control of General McClellan, "when he could reach it." Before that he had been, and was still, utterly powerless either to utilize or save it.

In the testimony before the Military Commission, among many inferences and erroneous statements, made on insufficient data, there are a few which bear on the subjects of this narrative.

For example, Lieutenant Bacon, of the infantry, states, from hearsay, of the cavalry, that they "took across roads, and cornfields and things of that kind." This is corroborative of what I shall have to say of our route, after leaving the Hagerstown—Sharpsburg turnpike, a mile south of Jones's Cross-roads.*

Lieutenant Colonel Hasbrouck Davis, of the 12th Illinois Cavalry, who commanded that regiment during the expedition, Colonel Voss being in general command, makes an interesting but too brief statement, principally with reference to the suggested passage of the infantry and artillery, which, of course, the imperative orders to Colonel Miles had forbidden.

He says: "We marched very swiftly, much of the time at a gallop; especially when we passed the pickets we went at a gallop; at other times at a trot. Until we reached Sharpsburg we marched at an exhausting rate; at a too exhausting rate I thought. We passed the rear pickets of the enemy's force this side (east side) of the Antietam works." These were the iron-works at the mouth of the Antietam.

Again, "We passed over the pontoon bridge and turned to the left in column of twos; we passed up between the canal and the bluff, and then turned to the right in the woods, and passed up several steep eminences. * * * At the rate we marched that night, it would have been utterly impossible for the artillery and infantry to have accompanied us, even if the road had been good."

Captain Powell, an engineer officer, says: "I know the enemy were very much surprised when they got in there and found so very few horses to take."

*Not shown on map. Jones's Cross-roads is at the intersection of the Sharpsburg—Hagerstown road with the one from Boonsborough to Williamsport.

One of the men of my company, then a prisoner, narrated to me, after his parole, how Stonewall Jackson, near whom he was standing, acted when he rode down to the headquarters of the surrendered garrison. In his short way he said, "Where are your horses? Where is your cavalry?"

"They are gone," was the reply.

"Gone!" he exclaimed, "Gone where?"

"They left last night, across the pontoon."

He sat on his horse in deep silence for a whole minute, and then said, "I would rather have had those horses and that cavalry, than everything else there is in the place."

THE OLD LUTHERAN CHURCH, SHARPSBURG.

Reproduced from "Battles and Leaders of the Civil War."

Between the eastern end of Sharpsburg, and what is now the National Cemetery, there stood, in 1862, an old abandoned Lutheran Church, on a hill through which the street was cut to grade. It is beautifully shown on the colored map of the Battlefield of Antietam, prepared by Lieutenant William H. Willcox, topographical officer and acting aide-de-camp on General Doubleday's staff, from actual surveys made shortly after

the battle, and which is the best map of the topography and positions, and of the surrounding region, with which I am acquainted. At the eastern edge of Sharpsburg this old church is clearly shown, as well as the Sharpsburg—Hagerstown turnpike. There is also an illustration of this abandoned church on page 605, Vol. II, of "Battles and Leaders," (Century Co., New York).

Here was posted on the night of September 14th the advance of Lee's army, retreating from the battlefield of South Mountain, and here, as General Lee reports, we encountered this strong advanced post, on our way from Harper's Ferry. This encounter was, in fact, the opening of the battle of Antietam, for during the remainder of the same night the operations of the cavalry were directly and continuously contributory to that great victory.

At midnight we encountered Lee's advance, as stated, at 3:00 o'clock we were near Jones's Cross-roads, in advance of Pendleton's artillery, which shortly afterwards crossed the turnpike, on its way from Boonsborough to Williamsport. Pendleton sent messengers back to Sharpsburg, which carried off, in the vain pursuit of the cavalry, one half of the Confederate troops placed on the 17th to defend the Burnside bridge and the fords of the Antietam, and thus opened wide to Burnside the backdoors to the whole rear of Lee's army. At 5:00 o'clock Monday morning, September 15th, we encountered, attacked, and captured Longstreet's entire ammunition train, eighty-six heavily loaded wagons and hundreds of prisoners This was two-thirds of Longstreet's whole supply, and its loss halted the attempted turning movement around McClellan's right on the afternoon of the battle. Next day the cavalry was ordered from Greencastle, Pennsylvania, back to the battlefield, where it held the ground near Jones's Cross-roads during the battle, "The extreme right of McClellans' army," and where the attempted turning movement would have first struck our lines.

I have often thought that on this battlefield, the greatest of the war, and to which victory the operations of this cavalry so accidentally, and yet so powerfully contributed, there should be a memorial, among the other splendid memorials there, of

MAP OF THE MARYLAND CAMPAIGN.

Reproduced from "Battles and Leaders of the Civil War."

this "Cavalry Column from Harper's Ferry," as there is of A. P. Hill's Confederate command, also from Harper's Ferry, and that this memorial should stand near where the old Lutheran church, on the eastern edge of Sharpsburg, stood, and where the Union troops, on that eventful midnight, first struck the advance of Lee's army, at the eastern entrance to Sharpsburg, and, as I have said, actually opened the greatest and most bloody battle of the war, Antietam.

Let us imagine a parallel case. Suppose that Stuart, in the Gettysburg campaign, the following year, instead of wandering off to Hanover and Carlisle, had boldly cut north between three corps of Meade's concentrating army, at night, and passed on directly through one of these divisions bodily; had pushed on by Emmettsburg, and encountered with rifle fire Reynold's advance picket force on Seminary Hill, at the edge of Gettysburg; had then turned south through the fields, passing through the bivouacs of many of Meade's wearied and hungry stragglers; had crossed the artillery reserve route of Meade's army, barely missing in the darkness four of his regiments marching directly down upon the cavalry; then by another right-angled deflection (made in ignorance of this brigade), crossing the line of march of Reynolds' whole ammunition train, and halting, attacking, and capturing it, with nearly one hundred heavily loaded wagons, six mules each, and six hundred prisoners, and carrying off the same in a wild helter-skelter run, and delivering the whole to Lee at Cashtown; and then returning under Lee's orders, the next day, to guard the fords of Rock Creek against a flank attack of Meade's right, during the battle of July 2d; would not these cavalry have justly claimed a full share in the battle of Gettysburg, and have received due recognition?

So I come, at last, to the narrative of this night of September 14th and 15th, of the year of 1862.

The principal firing which I heard until we attacked Longstreet's wagon-train, and its brigade guard, was there, at the old Lutheran church, at the eastern entrance to Sharpsburg by the turnpike, from Boonsborough.

At this time, midnight, General Lee was asleep at Keedysville, on this same turnpike, two and one-half miles distant

from Sharpsburg, and his trains were retreating from South Mountain, and were slowly pushing on to his positions, already selected for the coming field of battle.

That he should have marched out with his front unguarded, and with his flanks "*in the air*," without a single post in his advance, with Harper's Ferry besieged in his left front, and Couch, Franklin and even McClellan on his flank, by the Rohrersville road, is simply incredible. In fact, we are at no loss to know what measures Lee took to avoid these dangers. In his report to the Confederate President, September 16, 1862, (War Records, Vol. XIX, Part 1, p. 140) he says: "Accordingly the troops were withdrawn, *preceded by the trains* and about daybreak took position in front of this place," which was Sharpsburg, from which the report was dated. This indicates that the trains had passed Sharpsburg before daylight, the troops having taken position in their rear, and in front of that place, and so, facing McClellan's pursuing army. It is certain that none of Lee's trains had entered, or passed through, Sharpsburg when we encountered his advanced post, which was in advance of the trains, facing towards Sharpsburg, the only direction from which they could protect them, for the troops behind the trains fully protected them in their rear. In Lee's report to President Davis, of September 21st (p. 142, same volume), he says that on the night of the 14th he determined "to withdraw from the gap in front of Boonsborough to Sharpsburg." In his report of same date he says, "Unfortunately, that night, (14th), the enemy's cavalry at Harper's Ferry evaded our forces, crossed the Potomac into Maryland, *passed up through Sharpsburg, where they encountered our pickets* and intercepted on their line of retreat to Pennsylvania General Longstreet's train on the Hagerstown road." General Lee, writing only a day or two afterwards must have known where his pickets were, and this same night he slept at Keedysville, between Boonsborough and Sharpsburg, with his trains passing along the turnpike, and followed by his troops. As shown on the maps, and clearly so on the Willcox-Doubleday map already referred to, there is no road from Keedysville to Sharpsburg excepting the Boonsborough turnpike, which is direct,

and passes the old Lutheran church at the eastern entrance to that town.

In order to have reached the northern entrance into Sharpsburg from the Hagerstown pike, it would have been necessary to have marched from Keedysville one mile northwest (directly away from Sharpsburg), one mile southwest (parallel with the Boonsborough pike, six miles distant), and four and one-half miles directly south of Sharpsburg; all excepting the last over country roads, making this round-about distance six and one half miles, while from Keedysville to Sharpsburg, over the splendid Boonsborough turnpike the distance was only two and one-half or two and three-fourths miles, and nearly along an air line diagonal.

Hence the Confederate picket must have been in advance of the trains on the Boonsborough turnpike, and stationed at the old Lutheran church, where we encountered them.

Colonel Voss, commanding the cavalry column, in his unofficial report, in Sergeant Pettengill's book referred to later on, says: "Suddenly a sheet of flame illumined the darkness for an instant, followed by the report of at least a hundred rifles sending their laden messengers about our ears.

I was in the rear guard, in the main street of the town, and certainly, by the sound to me, Colonel Voss's statement was not exaggerated. General Lee says that we "encountered" their pickets in our passage through Sharpsburg.

Our orders were to force our way through the Confederate forces, and join McClellan, who was in that very direction, but with Lee's army interposed. In marching up the Potomac we would have been marching directly away from McClellan and into Lee. Hence we ran into Lee's pickets at the very spot where his retreat put his army directly betwen us and McClellan, but of which neither we nor the Confederates nor McClellan had the least idea. Such contingencies as these, to which several others will be added later on, are what make this expedition a game of cross purposes and coincidences stranger, from beginning to end, than anything I know of during the whole War of the Rebellion. Of course, accidental meetings and passings occured, but here was a force which, to all human calculation, did not exist at all and it was dropped down sud-

denly as from the sky into the midst of a couple of hundred thousands of soldiers composing the two armies, and it was not a mere scout; it was a force of nearly 2,000 experienced soldiers, strong enough to take care of itself and play smash with whatever of all possible unknown factors it might possibly encounter in the darkness. And then it went out, it was not to return to Harper's Ferry, but to stay out, and join McClellan.

In fact there was not a place in the State of Maryland where, up to the night of September 14th, a picket post in any force would have been more useless to Lee, than on any portion of the Hagerstown and Sharpsburg turnpike, thirteen miles from Sharpsburg up to Hagerstown.

A vedette or two to guide approaching troops might have been well enough, had not the roads been so large and well known, but certainly not a post at the entrance of the Hagerstown pike into Sharpsburg, as has been said, or at the crossing of this pike by other roads leading from Boonsborough to Keedysville. From Boonsborough to Hagersotwn the distance by the pike is thirteen miles. Longstreet, who had been marching all day, was rushed back from Hagerstown to Boonsborough by that road, with two divisions, leaving Toombs at Hagerstown to guard the supplies and trains, and march down the other pike to Sharpsburg. Stonewall Jackson, Ewell and A. P. Hill had all marched across this pike, crossing it at Jones's Crossroads, by the diagonal pike from Boonsborough to Williamsport, only four days before, and had left guards at Williamsport and down the Potomac; then driving all the Union troops on the Virginia side down to Harper's Ferry, while these Confedrate troops, with Walker on Loudon Heights south, and McLaws and Andersons on Maryland Heights and along the north bank of the Potomac, had shut up Harper's Ferry and its whole force hermetically. General William Pendleton, Chief of Artillery, was at this very time following the track of Jackson from Boonsborough to Williamsport, and crossing just behind us, as I shall show. There was not a Union soldier for a dozen miles southwest, north, northwest or northeast of Sharpsburg, or anywhere up the Hagerstown turnpike, and the fact was fully established, and known to Lee and the others.

But that a strong picket post should have been placed at the eastern entrance of the Boonsborough Pike into Sharpsburg, was quite a different matter. There was a cross-road from below Rohrersville, (where Franklin then was), across the mountains to his northwest, and from McClellan's army, near Middletown, which had access thereto in a roundabout way. Lee himself was asleep near Keedysville, about two and a half or two and three-quarters miles from Sharpsburg on the Boonsborough Pike. Lee's trains were moving towards Sharpsburg, and through it from Boonsborough, ahead of his troops which were thus interposed between the trains and McClellan's pursuing army. Sharpsburg had already been chosen as the ground where Lee was to halt and accept battle, for Lee, during the John Brown days, was in command over this very ground. This picket post was, hence, the local point of Lee's whole concentration, from Hagerstown, Boonsborough, and, later, from Maryland Heights and Harper's Ferry along the southern margin of the Potomac.

This picket post therefore pointed southwest, for the Confederate army was moving southwest, while the Union cavalry were approaching from the southeast, and headed north, so as to join McClellan, who was to be looked for near or east of Boonsborough. There he would have been found, had not D. H. Hill halted in the passes, and blocked the way until the battle of South Mountain had been fought, on the 14th, while Jackson had passed on by Boonsborough and Williamsport, and Longstreet and Hood up to Hagerstown, on the way to Pennsylvania, from which all were finally turned back to Sharpsburg, after McClellan, a few hours later, had reached Boonsborough, but from which, at the time, by Lee's retreating but interposed army, the cavalry from Harper's Ferry was totally cut off. Hence the encounter with Lee's advance picket on the Boonsborough pike, to which Lee refers in his report, and hence, too, the route of the cavalry was suddenly deflected from the east to the north, so as to pass around Lee's right flank and thence reach McClellan, as directed in the orders under which the cavalry was moving. I do not speak of this encounter as a sanguinary affair; it was a strategical coincidence, but one of high importance.

By what road now did this cavalry leave Shaprsburg? Was it by the country road diverging from the Hagerstown pike, which passed northwest from the western end of Sharpsburg, to New Industry and Mercersville, where the road touches the Potomac (some miles above)? Or was it by the Hagerstown turnpike, which was due north from the eastern end of Sharpsburg, and is immediately contiguous to where the picket post was encountered, and at right angles thereto and which is a broad and a capital highway, straight up to Hagerstown, where no one dreamed that Lee's troops were. In fact, the Hagerstown pike was the only possible road by which the cavalry could reach McClellan, as ordered, and everybody in the column knew that.

But, irrespective of this evidence, it would have been highly improbable that the cavalry would have left Sharpsburg by a road which would have brought them immediately alongside the Potomac, along the southern bank of which, only the preceding day, as we fully knew at Harper's Ferry, Jackson's force had been passing; which had forded the river below Williamsport, and doubtless left troops there, as was actually the case. Jackson could easily have thrown a force across and driven the cavalry back upon Lee's army had it come into sight, and his troops could not have failed to understand from whence this cavalry was coming.

I do not say that this could have occured, but there was nothing to show us that it would not occur, for while we were so little informed about Lee, we were fully informed about Jackson. This was because some of our cavalry had scouted up the north side of the Potomac from Harper's Ferry while Jackson was marching down the south side, and this scout was nearly up to the mouth of the Antietam creek. This was on the evening of the 12th, and we had heard the guns, and saw the troops from every side, during the day we left (Sunday), firing upon Harper's Ferry. Besides, as I have already said, following up the Potomac would have been the surest way possible of evading McClellan, (as Stuart evaded Lee in the Gettysburg campaign), while our orders were imperative, as follows: "Arrived at Sharpsburg, they will seek to join General McClellan and report to him for duty." Of course this affected the officers, and not

the rank and file, but these officers were those who, with their guide, were leading us and the men were told it also; and we were all for McClellan, as an alternative.

The orders to the commanding officer were, also, "to cross the Potomac on the pontoon, take the road to Sharpsburg, and cut his way through the enemy's lines."

Of course there was a good reason why we did not continue on to Hagerstown, for it had been occupied that day in overwhelming force, and was still occupied by infantry and artillery; but we knew nothing at all of this while we were in Sharpsburg, and could not possibly have learned it until we approached Jones's Cross-roads, eight miles on the way to Hagerstown itself, which so occured. But there was no reason at all, when we left Sharpsburg for taking a road which led away from McClellan, and directly toward the Potomac and A. P. Hill and Stonewall Jackson, about both of whom we were quite well informed at the time and before we started. The picket we encountered at the eastern end of Sharpsburg obviously came from Lee's army, and the last we knew of his army was when it started west from Frederick toward Boonsborough, and we had sense enough to know that there were plenty of rebels over there. Also, we had ocular demonstrations that there were plenty up along the Potomac, on the Virginia side at least, and which had crossed from the direction of Frederick and Boonsborough, but we had nothing at all to show us that there were any rebels north of us. Furthermore, no one in Sharpsburg knew half as much about the locations of the rebels as we ourselves did. So that ordinary horse-sense, not to speak of orders or roads, would have sent us straight up between these two opposing factors, towards Pennsylvania. That was the only living chance in sight, the only rent in the clouds. We couldn't go back; we couldn't go east; we couldn't go west or south, and we couldn't stay where we were at Sharpsburg. Anyone could understand that behind that picket post was something worth picketing, and that it was heading our way. And so came about another of those strange coincidences which we continued to encounter, from the moment we crossed pontoon at Harper's Ferry, after dark on Sunday, until we

entered Pennsylvania in broad daylight the next day, reaching Greencastle at 9:00 A. M.

The first of these coincidences was the fact that, while McLaws' division occupied Pleasant Valley, east of Maryland Heights, and confronting Franklin who drove him down nearly to the Potomac on Sunday, and with Anderson's division occupying Solomon's Gap and the western slope of Maryland Heights with two brigades along the slopes and woods on the western side of Maryland Heights, alongside and through which the Sharpsburg mountain road from Harper's Ferry passes, a threatened advance by Gouch and Franklin's movements down Pleasant Valley on the evening of Sunday, caused the Confederate troops on the western slopes of Maryland Heights, excepting their pickets, to be withdrawn for position in or facing Pleasant Valley, so as to be on Franklin's flank, and this occured just before the cavalry left Harper's Ferry, or even while it was passing the Potomac. In consequence, the strong infantry force which we would have encountered in the woods, and in the dark, was gone, leaving only their smouldering fires and pickets behind. With these tremendous mountain roads, in stone-darkness, and in the woods, riding at a gallop as we did, during which no one could see another as the files became scattered out, it was certainly a coincidence of the highest value to the cavalry. I saw rockets ascending from the top of Maryland Heights at frequent intervals on our right for a half hour, but they were not understood, or else they were too late. (See Confederate Reports, in Vol. XIX, W. R.)

The coincidence at Sharpsburg was that by running into Lee's picket post, we saved ourselves from running into Lee's whole army, as we would have done had we taken to a by-road, or to the open fields as we did later in the night, on our route from Sharpsburg towards Hagerstown.

Now, regarding the matter of the road we took from Sharpsburg, and that it was not the Mercersville road but the Hagerstown pike, I have conclusive evidence from Confederate reports made at the time, and published in the War Records Vol. XIX

The best War Records maps to consult (for it requires two to show the complete route from Sharpsburg) one plate XXVIII from Sharpsburg up to the Bakersville crossing of the road from Keedysville across the Hagerstown pike, and plate XLII, (Gettysburg Campaign), for the country from the Bakersville crossing of same road (a little east of Bakersville) over the same pike, up to the Pennsylvania line. The latter is a splendid map of the country involved, and illustrates the "Falling Waters" part of the Gettysburg Capmaign.

As I have always known, and stated, regarding this part of the cavalry route, when we halted and were bunched up in the main street of Sharpsburg, the street was crammed full for two blocks back from the Confederate picket, while we heard the firing going on in front at the church. As I have stated, my command was in the rear guard. The Confederates were obviously as much puzzled as we were, and neither side advanced nor retired. They were endeavoring to ascertain what the force was, and of which army was there in front of them. Meanwhile, after a few minutes, the head of our column turned off to the left, and as our turn came, in the rear we followed. It was an utter impossibility for the head of the column to turn back through the jam, in the dark, to reach the Mercerville country road and we just filtered off to the left, as troops are accustomed to do. Of course they could have gone up one block, (but not if the picket was on the Hagerstown pike), and then turned from the Hagerstown pike along a side street back to the Mercersville road, four blocks to the south, and then made a third turn up that road, but I know they did not do so, for we turned to the left, and kept straight on up the Hagerstown pike, and at right angles to our former course. Heaven knows, I had traveled it often enough by night and day.

We rode at a sharp trot along this wide, stone turnpike, directly north for miles, passing houses and villages dimly seen in the darkness. As I had gone over this road so often, from boyhood, I was naturally interested, and took note of the various objects as we passed along. I said, well, this means Hagerstown, and many of my comrades asked me questions about it, as we rode along, when closed up or when we struck a walk.

As we rode for about an hour, I concluded that we must be near Jones's Cross-road, which led from Boonsborough, where my two brothers lived, to Williamsport and near which my uncle was then living. This was six or eight miles from Sharpsburg, and just above Tilghmantown, a "string town," like the one I was born in, in Pennsylvania.

Just above this on the right side of the pike lived a doctor, Dr. Maddox, in a beautiful cottage-house, standing back from the pike and covered, its porch particularly, with vines and flowers. The gate was in a low picket fence in front of the middle of the house, where there was the entrance door. I knew the doctor's house as soon as I saw it.

Here the head of the column suddenly halted, and the cavalry bunched up again, filling the pike as had been the case in Sharpsburg. Boylike, I pushed up ahead to see what the trouble was, as there was no command that I had heard to halt. When near the house I inquired of one of the officers on his horse near by as to the cause of the stop. He said that a doctor lived there who was a strong Union man and with whom the guide was acquainted; that the guide and the officer in command had gone in to learn what he had heard as to what might be ahead of us. After a little while one of the officers came out and said that there were three divisions of the Rebel army in Hagerstown, with trains and artillery and that Longstreet was in command.

This information was strictly accurate during that forenoon but Lee, meanwhile, had ordered Longstreet and Hood and part of Jones's division, by the Boonsborough pike, back to help D. M. Hill at South Mountain, so that only four regiments of Benning's brigade, and a small brigade for the heavy reserve ammunition train guard were left at Hagerstown. These latter, with the trains, had already started on their way towards the ford at Williamsport, by the Hagerstown and Williamsport turnpike, while Benning's brigade was under marching orders to move down the Hagerstwon and Sharpsburg pike, to the latter place, and probably had already started.

This latter information, of course, was obtained later. All we got from the doctor was the presence of Longstreet with the three divisions at Hagerstown.

It was obviously impossible to go further up the pike towards Hagerstown. Like the old colored brother to whom his pastor offered only two roads, "one which leads to perdition, and de odder right straight down to hell," we concluded to "take to de woods."

At the suggestion of the guide or guides, the "bars" in the fence alongside the pike, on the opposite side from the doctor's residence and leading into the fields to the west, about one hundred yards south of the doctor's residence, were let down, the head of the column was buckled back, and the whole column filed into the open fields beyond. There were several old mills on Marsh creek, across those fields, Cross's, Fair Play, and another. I knew some who were employed in one of these. There was also a small run entering Marsh creek, along which was a broken fence, before reaching the run, and lots of brambles grew along the half worn out worm-fence. The run had cut its way leaving muddy banks two or three feet high. It bordered a large corn field beyond through which we passed after crossing the run. It was then roasting ear time.

Crossing this run was slow and toilsome work at night, even at a lope and before one-third of the column was across it became a quagmire. The command strung out into single file, with considerable intervals, much as on the mountain road from Harper's Ferry. I was in the rear guard and when I entered the corn field I was surprised to see it all broken down as though a herd of hogs or cattle had been it. But what surprised me still more was to see little fires smouldering or burning here or there among the corn.

Suddenly some one who was lying on the ground spoke up, and drawled out sleepily: "Say, what regiment air you?" I immediately answered, thinking it was the safest side, to claim just then: "Fourteenth Alabama Cavalry." Ye'r a d—d liar," which I certainly was, and my interlocutor, thinking it was a part of the chaff passing current among soldiers everywhere, rolled over, and went to sleep again, I suppose.

We were going at a quick trot and those in advance far out-distanced us, by reason of the slough, so that when I reached some farm buildings, which as I could see had a wooded hill, beyond its sky line and which I well knew. I rode straight

across the by-road, which made a short cut by Cross's mill, from the Hagerstown to the Williamsport pike. I passed through what appeared to be an open passage, probably through an open barn yard gate, and on up the hill through the open woods. I then suddenly brought up against a worm fence, with open fields beyond, and sloping rapidly down. I listened but not a sight nor a sound. I knew I had missed the road and that the cavalry must be somewhere to the right and front, if we were heading north, as I knew we were.

I rode up and tried a fence stake and it seemed rather old and wobbly, so I backed my horse off, (what a horse that was!) and drove straight at the middle of the panel. The top rails flew off like rockets, and over he went. Then I started down the hill through the fields, stopping every few moments to listen, and after having gone perhaps a half-mile, I heard that swishing murmur which marks the passage of a considerable body of cavalry. My horse pricked up his ears, and I rode down towards it, went nearly head-long over an invisible road bank, and landed squarely into our own column, just alongside where the road strikes Marsh creek. Glad! Well I should say so.

This road enters the Boonsborough—Williamsport road nearly opposite the College of St. James, which is about a half-mile to the north.

We then followed the Williamsport road about a mile to the west, and turned off into a road running north and northwest for about two miles, where it enters the Hagerstown and Williamsport pike, a little more then a mile and a half from Williamsport, which town we thus cleared by this cross-road.

The road, before striking the Hagerstown and Williamsport pike makes a sharp ascent to a long ridge, along which the latter turnpike runs, being cut down below grade so as to evade the summit of the hills. The road we were traveling along does not directly cross the turnpike, but its continuation is a couple of hundred yards to the left, whence it extends north towards Pennsylvania. Across this angle, which is swampy, runs a creek, which enters the Conococheague above Williamsport. Where we reached the turnpike the margin was lined with trees and behind these was an open wood, through which we had

already passed. From the crest at the pike, had it been daylight as it was before we got through with the Confederate train, the turnpike towards Hagerstown would have appeared straight, broad, firm and unobstructed for miles, but it was now covered with dust from the dry weather, and the dust of the road-bed.

Our operations against Longstreet's ammunition train, and its guards, occured at this point, which I will leave for the present to mention some other of the singular coincidences of this remarkable expedition. The first was the withdrawal of the Confederate troops from the Harper's Ferry and Sharpsburg Road on the western slopes of Maryland Heights just as we were moving out from Harper's Ferry across the pontoon bridge to follow this very road, as there was no other. The second being the night encounter with Lee's advance picket post, at the eastern end of Sharpsburg, which diverted our line of march to the left at a right angle, up the Hagerstown pike and so threw into our hands Longstreet's train and many prisoners. The third coincidence was the information received before reaching Jones's Cross-roads, which was erroneous at the time, but correct only a few hours previously, and which compelled us to leave the turnpike and take to the fields without returning to the pike at all. Had it not been for this deflection of our route, we would, long before reaching Hagerstown have marched directly into Benning's brigade of four regiments of infantry, marching towards us down the same pike from Hagerstown.

In the night, and in the confusion attending such an attack, there would have been material enough for a comic opera, but the result would probably not have been comic to us, as we would have had no room or opportunity to maneuver cavalry, while part of the enemy's infantry could have formed across the road, and the remainder used the fence corners. This was Toombs's brigade, then under command of Colonel Benning, from whose report (Volume II, Part 1, War Records, p. 161), I extract the following: "On the morning of the 15th I was ordered by General Toombs to place the brigade across the road leading from Sharpsburg to Rohrersville at the Stone Bridge over Antietam creek," (the Burnside bridge).

This shows that he had reached the lower Antietam by the morning of September 15th.

In General Toombs's report, (Volume XIX, Part 1, War Records, p. 888) he says: "About 10:00 o'clock on Sunday night, September 14th, I received orders to march immediately to Sharpsburg, which I did and reached there before daylight on Monday morning."

Benning says in his report that he had with him the 2d, 15th, 17th, and 20th Georgia regiments of infantry.

Our column left the Hagerstown pike about 1:30 or 2:00 o'clock on the morning of September 15th, and Benning reached the Burnside bridge, six or eight miles distant from Jones's Cross-roads before day light, so that in an hour more we must have met in the opera-bouffe encounter which I have described, a head-on collision at night, without scouts, skirmishers, or anything else ahead, on either side, as each believed that they were marching on their own ground.

So we opened the way for Benning, and then a fourth coincidence occured, which General W. N. Pendleton, Chief of Artillery in Lee's army, narrates in his report, (War Records, Volume XIX, Part 1, pp. 829–830.)

"At midnight (September 14th-15th) I was again summoned to your (General R. E. Lee's) headquarters, and directed to send Colonel S. D. Lee, with is battalion, on the road to Centerville (Keedysville, where Lee then was), and to take the residue of my command by the shortest route to Williamsport and across the Potomac, and then to enter upon the duty of guarding the fords of the river."

This command and the other troops under Pendleton, began this march from Boonsborough, as directed.

"By sunrise, Monday, 15th, we had reached the intersection of the Hagerstown—Sharpsburg, and Boonsborough —Williamsport roads, and there received reliable intelligence of a large cavalry force of the enemy not far ahead of us. I immediately posted guns to the front and on the flank; sent messengers to General Toombs, understood to be at Sharpsburg, for a regiment or two of infantry; set to work collecting a band of armed stragglers, and sent scouts to the front. These latter soon returned and reported the road clear for some two miles.

I therefore determined to advance cautiously, without waiting for infantry, in order to protect the large wagon train proceeding by the Hagerstown road through Williamsport. The cavalry, which consisted of three regiments, escaped from Harper's Ferry, crossed our road perhaps less than an hour ahead of us. We thus narrowly missed a rather strange encounter. My purpose was, of course, if we met, to attempt the destruction of those retiring invaders."

He does not state, in his report at what time he reached the Potomac, or what measures he took to pursue the cavalry, but says: "Having crossed the Williamsport Ford, I assigned to Colonel Brown its defense and that of another a mile or more lower down, and proceeded with the remaining battalion (Major Nelson's) to the neighborhood of Shepherdstown. By 10:00 o'clock on the morning of the 15th the guns were here in position on the heights overlooking the ford, a mile below the town, and the passage was thenceforth assiduously guarded."

The distance from Jones's Cross-roads (which is the point described in Pendleton's report) to the opposite side of the river at Williamsport was six and one-half miles.

The distance from Jones's Cross-roads to the Hagerstown and Williamsport pike at the point where the cavalry met and captured Longstreet's train and escort, was six miles. The sun, on September 15th, rose a few minutes before 6:00 A. M., and the cavalry attacked the train just before daylight. Colonel Voss, the commanding officer, says, in his unofficial report, (which see later): "The dawn of early morning was just approaching when we were on the point of crossing the turnpike."

General Pendleton's report establishes the fact that the cavalry came up from Sharpsburg by the Hagerstown pike, and not by the Mercerville road, the nearest branch of which was three miles to the west of Jones's Cross-roads.

It also establishes the fact that there were armed stragglers there in sufficient numbers to enable him to "collect a band of them." These were those we passed through in the cornfield; there could have been no others.

These stragglers were not from Benning's brigade which had, he says, already passed down towards Sharpsburg. They

had been lying at Hagerstown since September 11th, according to Longstreet's report, General Toombs saying "that when Longstreet was within four or five miles of Hagerstown, he was ordered to send Benning's brigade to Hagerstown. On Saturday night, at Hagerstown, he was ordered to hold his command in readiness to march at daylight, but received no further orders until about 10:00 o'clock on Sunday night, September 14th."

The regiments of Benning's brigade thus had two days or more of solid rest, in the city of Hagerstown, where food was abundant, and where Longstreet's supply trains also were. It was a cool night-march of six and one-half miles from Hagerstown to Jones's Cross-roads, and they must have thus passed by the stragglers lying in the cornfield which we passed through, and which was nearly a mile west of the Hagerstwon pike, where we left it to cross the fields.

These were not stragglers in the proper sense of the term; they were "bummers," similar those in Sherman's army, where I afterwards served. They were "coffee boilers," for they straggled ahead and not behind to find something to eat. After their battle at and march from South Mountain, they were following up, and scattering along from Boonsborough and beyond till they found green corn enough to eat, not yet confiscated by others. They then lay down, almost tired to death, to sleep where they ate. And these fires were not regularly "bivouac fires," but "roasting-ear fires" as I knew of old.

After our odyssey through them they doubtless cogitated and wandered back to the region around Jones's Cross-roads where they gave General Pendleton the information contained in his report, and where he gathered them into some sort of a band "for protection" against us desperadoes. Certainly Benning got no information from any of them, for he only heard of the cavalry next morning, when already at the Burnside bridge.

Of course no theory could be built on such premises if they were not corroborated by my own knowledge. Colonel Arno Voss, who was the commander of the cavalry expedition, in an unofficial narrative made from memory long afterwards, to my comrade, Sergeant S. P. Pettengill, and published in his book, "The College Cavaliers," 1883, says of our route through

the fields: "By this time a bright starlight had succeeded the impenetrable gloom of the early night, enabling us to discern surrounding objects more distinctly. We were also guided in choosing our path by the faint glimmer of *their* bivouac fires." He certainly saw what I saw, but he did not get his information from me, for I never saw or knew him afterwards. He then describes our dash through "the astonished grey-coats," describing some "cutting down" of all opposition, which I did not witness, and I was in the rear guard, and was fully occupied with "cutting ahead," as fast as my charger would carry me.

Now, consider this odd situation. We marched up nearly to Jones's Cross-roads, and then left the pike to cross the fields to the west and northwest, and we stirred up, on the way, the Confederate stragglers in the corn. Almost immediately after, Benning's Confederate brigade came marching down from Hagerstown, ignorant of us, and we equally so of them. Almost immediately after that, General Pendleton's artillery came marching up the road from Boonsborough to Williamsport, and when he reached Jones's Cross-roads, he was ignorant of both Benning and us, and we were equally ignorant of him and Benning.

By this time the Confederate stragglers, far more bewildered than any of us, and miles away from where they belonged, had come upon the scene and told their story to Pendleton. Now for the first time anyone was able to piece up this succession of events into any possible shape. At the same time, right across our pathway ahead was lumbering along Longstreet's ammunition train of more than eighty heavily loaded wagons and their drivers, and a brigade of train guards, of which we were entirely ignorant, just as Pendleton was ignorant of where we were wandering, and what we were trying to do, and we equally ignorant that he was pursuing us with hostile intentions. Then picture all this occuring during the darkness of night.

But another complication in the nature of a coincidence with far reaching effects ensued from the crossing of the Hagerstown—Sharpsburg turnpike by General Pendleton, and the reports of the stragglers there encountered. Immediately after the passsage of our cavalry which must, by their deflection,

inevitably cross the road on which Longstreet's immense train was passing from Hagerstown to Williamsport; for Pendleton knew this at Lee's headquarters, which he had just left to go to Williamsport, (where the train also was to go); and the fords of the Potomac, which both were to cross, were those which he was to guard. But he did not know just where the train might be, along their road, not where the cavalry might be, going north without any road, except that it was to pass somewhere between Hagerstown and Williamsport, and which force he undertook to pursue "cautiously," and endeavor to engage and destroy as he reported.

Meantime Benning, with Toombs's brigade, was marching down to Sharpsburg, which General Toomb's in his report, says, reached Sharpsburg before daylight on Monday morning, September 15th.

General Pendleton in his report, says that on arriving at Jones's Cross-roads, and learning the situation from the "stragglers," he immediately posted them to the front and on the flank, and sent messengers to General Toombs, understood to be at Sharpsburg, for a regiment or two of infantry.

Turning now to the report of Colonel H. L. Benning, commanding Toombs's brigade, (Volume LI, Part 1, p. 161, War Records), we will at once see the momentous effects of the cavalry movement toward Longstreet's train, so many miles away.

"On the morning of the 15th I was ordered by General Toombs to place the brigade across the road leading from Sharpsburg to Rohrersville at the Stone bridge over Antietam creek, and to defend the bridge. Hardly had I received this order and commenced to execute it when I received another order from him to detach two regiments of the brigade and send them towards Williamsport in pursuit of the enemy's cavalry, which the night before had escaped from Harper's Ferry and gone toward Williamsport to the peril of our wagon train, proceeding to that place from Hagerstown. Accordingly, I detached the Fifteenth and Seventeenth Georgia and sent them off under Colonel Millican on this duty. This left me for the defense of the bridge only two small regiments, the Second Georgia, under Lieutant Colonel Holmes, and the Twentieth Georgia,

under Colonel John B. Cumming. With these two regiments I proceeded to the bridge and there put them in position as ordered."

"Shortly before the fight at the bridge terminated" (about 1:00 P. M., Wednesday, September 17th) "the Fifteenth and Seventeenth by forced marches had returned from Williamsport by way of Shepherdstown, and when that fight terminated they were in line of battle on the right and 400 or 500 yards in advance of the general line of battle, which was along the summit of the ascent from Antietam creek." Here they remained until about 4:00 P. M., September 17th. It is obvious that, if Benning's brigade reached Sharpsburg before daylight, and was ordered to the Burnside bridge, and before the order was executed, he was directed to detach two of his regiments, and that this was in consequence of the messengers sent by General Pendleton from Jones's Cross-roads, who had to march about seven miles to reach Benning, then Pendleton must have reached Jones's Cross-roads much earlier than sunrise, which is also established by his statement that the cavalry had passed "perhaps less than an hour ahead of us." We crossed not later than 2:30 A. M.

This depletion on a wild goose chase, "left confronting Burnside's whole 9th corps and the Kanawha division, together with all his artillery, light and heavy, during the whole forenoon of the battle of Antietam, and part of the afternoon, not more than 500 Confederate infantry, besides one battery, Eubank's, until 9:00 A. M., and Richardson's afterwards, the latter at a long distance in the rear. Benning's report concludes with what would have happened had General Burnside crossed the Antietam after McClellan's right front attack had drawn everything which he could spare over to the latter's left, while Burnside was so often and so urgently ordered by McClellan to do at once, which he did not do during all the forenoon.

Says Colonel Benning, "If General Burnside's corps had once got through the long gap in our line it would have been in the rear of our whole army, and that, anybody can see would have been disastrous."

Respecting the number of Confederate troops opposing the Ninth corps and the Kanawha division, with their batteries, I

cite the following confirmation from a War Department letter signed by General E. A. Carman, of May 13th, 1905:

"Heysinger is entirely correct in saying that the bridge was defended by less than 500 Georgians and some 100 South Carolinians, but there were several Confederate batteries that dropped their shell upon the Union assailing columns, and from these the 51st Pennsylavnia and 51st New York suffered."

The only Confederate batteries referred to in any reports, and by position the only ones within reach, were Richardson's, which remained, and Eubank's, which later was ordered away about 9:00 o'clock in the forenoon.

Says Colonel Benning in his report (Volume LI, Part 1, War Records): "The next morning early (that of the 17th) the skirmishing was renewed. It continued constantly growing heavier on the part of the enemy, till about 9:00 o'clock, when our skirmishers were driven in. At about 8:00 o'clock Captain Eubank discovered a large body of the enemy opposite to him in a wood within range of his guns. He opened fire on them, and drove them in confusion from the wood, and with loss, to judge from the movement of the ambulances. Not long after he had finished this work it was ordered away."

Says General Toombs in his report (Volume XIX, Part 1, War Records): "Finding that the battery belonging to my brigade (Captain Richardson's) was placed too far in my rear to render me efficient service in defending the passage at the bridge, I applied to General Longstreet for another battery. He ordered Captain Eubank to report to me, who was placed in my rear about half-way between the river and Captain Richardson's battery, and rendered efficient service as long as it remained in that position."

"Not being able to get any reinforcements for the defense of these two fords, and seeing that the enemy was moving upon them to cross, * * * and Eubank's battery having been withdrawn to the rear nearly two hours before, I deemed it my duty to withdraw my command."

Colonel Benning continues his report: "Thus the two regiments were left at the bridge without any artillery supports whatever. The general line of battle of our army was nearly,

if not quite, three-quarters of a mile in their rear, and not a soldier was between them and that line."

So it will be seen that the detachment of one-half Benning's whole force, directly due to the cavalry movement toward Longstreet's wagon train, actually opened the door to Burnside's whole army corps, had he chosen, during the whole forenoon, and until 1:00 o'clock in the afternoon, to wade across or walk across the creek.

Regarding the route pursued by the cavalry, General Stuart, in his report, (Volume XIX, Part 1, p. 818), says that he took General McLaws to the Maryland Heights before the surrender of Harper's Ferry, and urged the "holding of the road from Harper's Ferry toward Sharpsburg, at the Kennedy farm, as he had been there during the John Brown raid, before the war;" and, because this road was not thus held, the entire cavalry force at Harper's Ferry, "escaped during the night by that very road, and inflicted serious damage on General Longstreet's train in the course of their flight." He might have added that it was very serious damage, for we took the whole train, bag, baggage, ammunition, and prisoners.

It may be of interest to note that in Volume II, "Battles and Leaders, Century Co., 1887," on page 665, is a capital illustration of the abandoned Lutheran church, at the eastern entrance to Sharpsburg, where Lee's picket was stationed, and which we encountered. Also, on page 606, is a capital map of Harper's Ferry and its surroundings, showing the start of the cavalry across the pontoon, then to the left along the canal, and then perpendicularly up, on the map, the mountainous road which, later, by a left turn leads to the mouth of the Antietam creek. Anderson's troops lay between that road and Maryland Heights, on the lower wooded slopes, opposite the "Stone fort" on the summit. The map will also show that, although the map shows no part of Pleasant Valley, which lies to the east of the mountains, troops coming down Pleasant Valley towards the Potomac would be entirely out of reach of Harper's Ferry while they would be exposed, without power to reply, to a plunging fire, for three miles from the troops and batteries on Maryland and Loudon Heights. The only possible route to Harper's Ferry is along the river, where it is marked

"Baltimore & Ohio R. R." and which is only wide enough, and that in part blasted out, with a ledge twenty feet high for the canal, the railroad and the turnpike, probably sixty feet wide in all.

I will now return to the position of the cavalry column where it reached the summit of the ridge along which ran the Hagerstown and Williamsport turnpike, the route by which Longstreet's ammunition train was slowly approaching, in seeming security from Hagerstown with most of the train guard in the rear.

By consulting the excellent map, Plate XLII, "Atlas to War Records," which illustrates the topography of the "Falling Waters" region (Gettysburg Campaign), it will be easy to understand precisely what occured here.

Passing through the bit of open timber south of the pike, before reaching the latter, the pike runs at right angles to the left of our approach for one-eighth of a mile on its straight course to Williamsport, distant about one and a half miles to the ford across the river. But for one-eighth of a mile the road along which we had been advancing follows the turnpike, and then continues north towards Pennsylvania, so that we travelled north to the pike, then at a right angle southwest along the pike for one-eighth of a mile, and then north again, to the Pennsylvania line and Greencastle. The turnpike from Hagerstown runs southwest to Williamsport. This deflection left the space between the Greencastle road and the pike a sort of acute angle, across which ran a sluggish, swampy creek, which crossed the road a quarter of a mile beyond the pike. So that any troops on the pike, by running across this angle would encounter any troops passing north on the Greencastle road, at much less distance than by following the pike, and then the road around. The ground where the creek ran was swampy in the fields, and low on the road. The turnpike also ran down hill from the summit where we attacked and the Greencastle road continued the descent until the creek was passed. This latter road was rough, rocky and irregular, and with water at the bottom of the descent. Then it rose again sharply, and continued on high ground up to the Pennsylvania line, but with a good many kinks and turns.

As we sat on our horses (no one ever dismounted that I know of from the time we left Harper's Ferry until we reached Greencastle, a distance of nearly or quite fifty miles), the day was just breaking. After waiting for a few minutes a dull rumbling sound was heard up the pike toward the right, and a little while afterwards a dense yellow cloud became visible. It seemed enormous, as it approached. Soon it was noised among us that it was a long wagon train or else a large force of the enemy moving from Hagerstown. During this time arrangements were being made for our attack, and, to my mind, they were admirable. I still look back to them with admiration, after several more years experience in the cavalry and infantry.

They were undoubtedly due to the skill and experience of Colonel B. F. Davis, commanding the 8th New York Cavalry, who was then a captain in the regular army, afterwards brevetted Major for this night's work, a West Point graduate, and one beloved in the old army as "Old Grimes" Davis. He was killed June 9, 1863, at Beverly Ford, (Brandy Station), while gallantly leading his brigade, the 1st Brigade, 1st Division, Pleasanton's cavalry corps, Army of the Potomac.

One regiment of cavalry was deployed along and back from the south side of the turnpike, concealed, as yet, by the trees and bushes. I presume that this was Colonel Davis's own regiment, the 8th New York. In rear of this regiment with its line of battle facing the turnpike, another regiment, the 12th Illinois, was formed in column of fours, facing the left, and the Maryland and Rhode Island cavalry behind this formation, and principally to the right. The purpose was to allow as much of the train to pass as was possible, then to make a frontal attack on the flanks of the passing wagons, drive off the train guard, and attack those in rear of the train. The column in fours was then to sieze the wagons one by one, give to each wagon a special half-dozen cavalrymen, and send it headlong down the pike to the Greencastle road, and then, at right angles up that road to Pennsylvania. The remaining cavalry was to take care of the infantry guard, and protect the train, with its new owners, from pursuit or attack.

These movements were carried out to the letter. The train was struck from the south while passing us by the flank, with the Confederate infantrymen sauntering alongside the wagons. Our troops were rushed across between them, many captured, and piled into the wagons, and the remainder driven down the hill, and pursued through the thickets toward the swampy creek. While the wagons one by one were seized by the cavalrymen appointed for that purpose, two men galloping alongside the drivers, two alongside the mules, and two behind, all with arms and sabers drawn, and away they went on a dead run, belaboring the teams with the flat of their sabers, and urging the negro teamsters to put on all the steam possible.

As they turned up the Greencastle road, passing the opposite side of the triangle, they were in full view, and it was a sight to see. The time required to start the wagons, after loading in what human timber they could hold, lengthened out the line so that the wagons were galloping about forty ot fifty yards apart; all hands yelling and banging the brutes, the darky drivers scared green, and urging their teams along with a pistol pointed at each side. The officer stationed where the roads branched gave quick directions, and pointed each team up the Pennsylvania road, many with darkeys or others astride the mules, of which we only caught glances as we were busy with own work. At length, for broad daylight had long been with us, the last wagon was gone, leaving not a scrap, except what of the brigade train guard that had fled out of sight. Then we followed in behind, to close up the last of the departing train.

The fugutive Confederates, seeing our column all turn up the Pennsylvania road, at right angles north, instead of south to Williamsport, seemed to have recovered their senses and began swarming across that triangle towards the small creek, and firing rapidly, with a range of perhaps two hundred yards; but everything was in rapid motion, and they were mired among the creeks and the swamps, and their firing didn't scare us a bit as we trooped along.

They did not cross the creek, as we could have charged them there over good ground, and we were soon beyond their range and safe from infantry pursuit.

I have been asked why they did not attack more furiously while we were tearing the train to pieces. I can only say that it was not yet full daylight when the attack began, and everything was involved in clouds of yellow dust which hung in masses, there being no wind whatever. Doubtless, too, they had no idea who we were, where we came from, or what was behind. Later on, they could not have organized, except in the open where the cavalry could have broken them up before they had a chance to form. As for firing on the wagons of their train, all the vacant room in these wagons was full of Confederate wounded and otherwise disabled, (some from the South Mountain battlefield) besides the prisoners which we had put in afterwards, as well as their regular negro teamsters, of which there were more than two hundred. It was said, when we reached our destination, that a wounded Confederate brigadier had died on the way on account of the rough riding.

The riding certainly was rough enough, so fast and so rough that sixteen of the wagons broke down entirely, and were blown up with their own powder and left behind. I passed one of these in particular which left a cavity in the road big enough to contain the whole wagon. In fact, as we were the rear guard we passed them all. The wagons were nearly all of the old Conestoga type, with six mules each, and all filled with artillery and small arm ammunition, except what forage could be piled in on top, for the teams. I know that when we reached Greencastle, there was nothing edible to be found in the wagons, and the negro drivers, as well as the rest of us, had to forage for grub. I have often thought that this exploit, in my opinion, due almost entirely to quick genius and ability of "Grimes" Davis, deserved a far higher recognition than it every received. He was a splendid officer and, had opportunity afforded, would have left a name high among our cavalry generals.

The wagon master of this train was a Pennsylvanian, from near where I was born, whom I knew, but did not expose, and who was among the prisoners. When we sent them down to Chambersburg with the captured train, while we turned back to Antietam, they all knew him there and undertook to lynch him, but our officer in charge told them that if they did he would "burn their old town," which McCausland afterwards did, to the great improvement of Chambersburg.

After passing the Maryland and Pennsylvania line we had a first rate road all the way up to Greencastle, but it was so dusty, and we were so begrimed with dust that we actually looked more like monkeys than human beings. I think that I was the dustiest and dirtiest that morning that ever I was in my life, far more so than any Confederate I ever saw. We were indeed taken for Confederates, with our big train, and no wonder and all believed the invasion of Pennsylvania had indeed begun. What a scurrying there was; United States soldiers were quite invisible to us. The good women of Greencastle, learning who we actually were, and that we had nothing to eat; nothing to cook anything with; and that our horses had nothing, came out of their houses like angels of mercy, with great slices of Pennsylvania loaves of bread, thickly spread with butter and apple butter, and there we sat in long rows along the curb stones eating, while our horses, we holding their bridles in our hands, munched their forage before us.

A member of the 15th Pennsylvania cavalry, (a detachment of which was then in Greencastle), C. B. Newton, of Company "F," of that organization, writing, long afterwards, from India, in the History of that Regiment, 1906, describes our entrance into Greencastle as follows:

"One of my stirring memories of that journey down the Cumberland Valley is a scene worth remembering. When General Miles surrendered to the rebels at Harper's Ferry, a gallant band of Union cavalry refused to yield, and cut their way out. Journeying northward, they came across a long wagon train loaded with supplies for Longstreet's corps of Lee's army. The train consisting, so far as I recollect, of some seventy wagons they captured with its escort, and brought them along. I saw the dusty procession marching into Greencastle, and had the honor of being placed, loaded revolver in hand, on the hind step of an omnibus, to stand guard over the rebel prisoners of that escort, whom I conducted to the town jail. I felt almost as proud as if I had captured that wagon train myself."

Subsequently, near Vicksburg, Miss., I heard a regular army officer, alongside a fire of fence rails, say that he never felt so proud of the American army as one morning when, in a

little town in Pennsylvania, where he had been sent on some special duty, in September, 1862, he saw a long column of the dustiest cavalry he ever saw, suddenly emerge from the rebel army, bringing with it Longstreet's whole ammunition train, and hundreds of prisoners." When I told him that I was one of that cavalry, he came over to my fire and said, "Young man, I want to take your hand." He was killed soon afterwards,

General Longstreet, writing to my comrade, Sergeant Pettengill, from Gainesville, Georgia, April 6, 1880, says:

"Dear Sir: The service you refer to was very creditable, and gave us much inconvenience. The command, being in retreat, and more or less apprehensive for its own safety, seems to have exercised more than usual discretion and courage.

I am very truly yours,

JAMES LONGSTREET."

After the close of the war I became well acquainted with General John G. Walker, commanding his own division at Antietam on the Confederate left and in contact with Jackson, Hood and Longstreet. He told me that we had gotten two-thirds of all of Longstreet's ammunition and that the loss of this had caused serious injury to them, as its loss could not be supplied. In fact, he used much stronger language than I have given, and thought our night's move was one of the most extraordinary that he had ever heard. He said it was the subject of much discussion among the Confederate officers, and led to unfavorable comparisons with some of the wild-goose "rides-around" of Stuart, until they culminated at Gettysburg, where he rode around his own army, and with disastrous consequences.

Colonel Arno Voss, of the 12th Illinois cavalry, who was in command of the expedition, sent the following telegram to General Halleck, at Washington, immediately after arriving at Greencastle: "Harper's Ferry is from all sides invested by a force estimated at 30,000. By order of Colonel Miles, I left it last evening with the cavalry, about 1,500 strong, to cut my way through the enemy's lines. I succeeded in reaching this place about 9:00 this morning, having passed the enemy's lines about three miles northward of Williamsport, and captur-

ing a train of over sixty wagons, loaded with ammunition and 675 prisoners."

General McClellan telegraphed to General Halleck, September 23, 1862: "The conspicuous condcut of Captain B. F. Davis, 1st cavalry, in the management of the withdrawal of the cavalry from Harper's Ferry at the surrender of that place, merits the special notice of the Government. I recommend him for the brevet of major."

Brigadier General Julius White, second in command at Harper's Ferry, and who succeeded Colonel Miles when the latter was mortally wounded, writing in "Battles and Leaders," Vol. II, p. 613, says:

"During the evening of the 13th a consultation took place between the writer, then temporarily in command of the cavalry Colonel B. F. Davis of the 8th New York, and Lieut.-Col. Hasbrouck Davis of the 12th Illinois, at which it was agreed that the mounted force could be of little use in the defense; that the horses and equipments would be of great value to the enemy if captured, and that an attempt to reach McClellan, ought therefore to be made."

Colonel Miles issued the order next day, directing the cavalry to move out on the evening of the 14th, under the general command of the senior officer, Colonel Arno Voss of the 12th Illinois.

"Under the inspiration and immediate direction of the two Davises, who rode together at the head of the column, the escaping force accomplished the brilliant achievement of reaching the Union lines without the loss of a man, capturing on the way a Confederate ammunition train of 97 wagons and its escort of 600 men."

Regarding the number of wagons captured, my own recollection is very positive that we brought into Greencastle seventy-five, and blew up sixteen which broke down on the way.

Colonel Voss, writing to Sergeant Pettengill, (see his "College Cavaliers"), say that there were eighty-five army wagons, each drawn by six fine mules, "and loaded with ammunitions of war and provisions," and followed by about thirty to forty head of fat young steers.

As I have already said, neither I nor anyone I knew found any provisions, and, as for the steers, the Confederates certainly lost them, but I do not think they reached Pennsylvania.

Regarding General White's statement that we had not lost a man, I am not sure of that. Colonel Voss, in his letter to Sergeant Pettengill, says that "our loss amounted to about one hundred and seventy-eight men reported to me as missing, some of whom afterwards returned to their respective commands."

I know that it would have been impossible for such a column of cavalry, in such a night ride, and with the various contacts with the enemy, to have come into Greencastle with everyone "alive and hearty." There was no roll call, no surgical attendance, no food, no appliances, not even a skillet, no inspection, and none possible, for we were almost immediately ordered down to Jones's Cross-roads, "forming the extreme right flank of McClellan's army at Antietam," after which the command was scattered, and never again reunited.

Examining the unofficial report of Colonel Arno Voss, who, as senior officer, was assigned to general command of the expedition in Colonel Miles's order for its departure, and which is embraced in the work, "The College Cavaliers," by my comrade, Samuel B. Pettengill, published in 1883, twenty-one years after the events described, it seems desirable to point out the necessary errors of topography. These are due to the fact that Colonel Voss had no personal acquaintance with the country or the roads traversed, excepting what he learned in the darkness during this one night ride, and that he wrote his report more than twenty years after the date of the expedition, and without opportunity for consultation with those familiar with the events or with the country. He was never there before, and never after, the battle of Antietam. His report is vivid and truthful as to the facts within his knowledge, and is the only report from any of the commanding officers, guides or scouts, or from any subordinates who had actual knowlegde of the topography of the roads. Sergeant Pettengill, my company comrade, with whom I was nearest in companionship, (excepting, perhaps, his cousin Wilder L. Burnap, afterwards a distinguished lawyer of Burlington, Vermont, of the same com-

pany), made no report of the march, although we had been all over it, as far as the mouth of the Antietam creek, only two days before, September 12, 1862.

The official order, under which the expedition was undertaken, which was obtained with much difficulty from the commander of the post and of the troops Colonel Miles, was as follows:

HEADQUARTERS, HARPER'S FERRY,
September 14, 1862.

Special Order No. 120:

The cavalry force at this post, except detached orderlies, will make immediate preparations to leave here at 8:00 o'clock without baggage wagons, ambulances, or led horses, crossing the Potomac over the pontoon bridge, and taking the Sharpsburg road. The senior officer, Colonel Voss, will assume command of the whole, which will form, the right at the Qusrtermaster's office, the left up Shenandoah street, without noise or loud command, in the following order: Cole's cavalry, 12th Illinois Cavalry, 8th New York Cavalry, 7th Squadron of Rhode Island Cavalry, and 1st Maryland Cavalry. No other instruction can be given to the commander than to force his way through the enemy's line and join our own army.

By order of Colonel Miles,
H. C. REYNOLDS,
Lieutenant and A. A. G."

To this Colonel Voss, in his unofficial report, adds: "Arrived at Sharpsburg, they will seek to join General McClellan and report to him for duty."

Continuing, now, my own narrative, the column was formed as directed in the above Special Order. My command being on the left was extended from the pontoon bridge to Shenandoah street, which lies alongside and nearly on a level with, the Shennandoah river, while the front of the column (the right) extended from the pontoon bridge up the hill to the main part of the town. Near the southern end of the pontoon bridge, in a house with a porch, (probably at one time a tavern), was located a sutler's establishment, under the management of two bright Hebrew sutlers.

Sergeant Pettengill narrates vividly the fact that, in the dark of the approaching night, these two sutlers passed up our line, which was mounted and standing still and silent, and handed to each cavalryman a paper of fine cut tobacco, from baskets which they carried. This was such an unwarranted favor to departing troops that Pettengill could only account for it on the supposition that the rebels would get it anyhow next morning, which was the general opinion, and made us feel grateful to army sutlers, for once. But there was a sequel which I have never seen mentioned by anyone, except by a few of the rear guard at the time, although I can vouch for it from personal knowledge.

Wild as the roads were, almost impassable by daylight, these two thrifty sutlers, hearing only that we were going out by the Sharpsburg road, saw salvation for their most valuable effects in the good will of the departing cavalry. After the passage of Cole's cavalry, the 12th Illinois, and the 8th New York, and before the march of our own—the rear guard—commenced, they slid in with their two sutlers' wagons, into the brief interval and, in the darkness, were either unnoticed, or there was no time to interfere with them. I know there was one of these wagons, and feel very certain that there were two.

Away we went, striking a dead run as soon as we passed the pontoon, up the level bank of the Potomac for a mile, when the Sharpsburg road, such as it was, drove straight up a tremendous mountain climb, so steep that one had to grasp the horse's mane to be safe (at a gallop) from sliding back or shifting his saddle. I did not see these wagons, I saw nothing, for it was stone dark, and the horses took their way by scent, or sound, or instinct. There was no order, and the troops strung out single file as they could, till more level ground was reached far ahead.

Perhaps a mile up this climb, with its ups and downs, the road made a sharp turn around the end of a rocky knob, which I had well known before, and which was walled up on the west to make a road-bed. Over this wall we looked down to the left, into a deep gorge apparently hundreds of feet down the steep slope, with scattered trees and bushes, as far as the eye could penetrate. The wall which sustained the left of the road was about five feet high where it overhung the gorge.

I had noted this only two days before when we passed it on our reconnaisance to the mouth of the Antietam Creek. It seems that when these sutlers' wagons reached this bend, urging forward with all speed, their horses failed to make the turn, and over they went, men, wagons, horses, goods and all.

When I reached this spot I heard a great noise and crashing, shouts and groans, and indescribable sounds, down the gorge, and pulled up to listen. It was certainly a horrible state of affairs far down among the trees, and I could distinguish the groans of horses and men, and the cries of the latter for help. I concluded that some of our men had gone over the precipice. But there was no help, and, after a few moments, I started on again, with renewed speed, as the ground was then better. Those sutlers and their outfit went no farther with us, and I have never heard of them since. Perhaps they are lying there still. There was no more chance for them, when they started, than to climb up the cone of Vesuvius at a gallop in the midst of impenetrable darkness. Their catastrophe could not have occured more than three or four minutes before I passed as the crashing among the trees was still going on.

To return now to Colonel Voss's unofficial report.

He says that, on starting, he was "here provided with two reliable guides, natives of these parts." I know that there was one, for it was so stated when they entered the doctor's yard, just before we reached Jones's Cross-roads. I have no doubt that there was two, but I never heard who they were, although I am a native of those parts.

The order was to march at 8:00 o'clock. Pettengill says that at the appointed time the march commencced. Colonel Voss says that he formed his column "when night had spread her dark mantle."

It has been said that the march did not commence until about half-past nine. This is not true. The sun had set a few minutes before six, and among these dark mountains night came soon. The head of the column was in motion within a few minutes after eight, and could not have taken more than twenty or thirty minutes for the whole command to clear the bridge. They crossed at a trot, at least the rear did.

Colonel Voss says that Company "D," of the 12th Illinois, by mistake turned to the right, down the Potomac, instead of to the left and encountered a rebel picket, when it turned back in the proper direction. I have no doubt of the fact. I did not see it, not having as yet crossed the river. He says that the column encountered a few rebel pickets on the mountain road, who challenged, "but were quickly rode down or pushed out of the way; their random shots in the darkness did but little damage." This was true for I saw the camp fire, rode right through it, and saw other smouldering fires in the woods, from the road up towards Maryland Heights, and saw the debris left by the scattered pickets. This was before reaching Kennedy farm (the John Brown farm). A good topographical view, taken near the time, from Loundon Heights, shows in the left distance this spot. (See "Battles and Leaders," Vol. II, p. 608, and see also the map on p. 606, same volume.)

The great topographical map prepared by General Michler, by order of General Humphreys, Chief of Staff, in 1867, (Military Maps, Army of the Potomac and Army of the James), will show this whole region with unexampled accuracy and detail.

Colonel Voss says that we reached a strong Confederate outpost "placed at the entrance of the Hagerstown road into the city of Sharpsburg." As I have already shown, this is an error. Longstreet had no troops on the Hagerstown pike until Toombs's brigade came down to Sharpsburg from Hagerstown, near daybreak, next morning. Lee was at Keedysville, which was on the Boonsborough and Sharpsburg turnpike, and he says that his advanced picket at the entrance to Sharpsburg was encountered by our cavalry. Referring to the great quarto topographical map of Michler and Humphreys, already referred to, (Antietam sheets), it will be seen that no force from Keedysville could have reached the Hagerstown pike by any direct road, while Lee's trains, as everyone knows, were moving ahead along the Boonsborough and Sharpsburg road. There is also a passable road from Rohrersville, then held by our troops, and from the South Mountain battlefield, then also in our possession, passing south of Keedysville directly to Sharpsburg. Any Confederate picket on the Hagerstown pike would have been caught directly in their rear, before the pickets could

learn of McClellan's or Franklin's, or Couch's approach, and driven north. This would have left Lee's assembling troops at Keedysville, and his trains creeping ahead at Sharpsburg, and exposed. While a picket on the Hagerstown pike would face no enemy whatever, for Toombs was at Hagerstown, Jackson stretching from Williamsport, down to Harper's Ferry, and the cavalry expedition undreamed of. Besides, Lee's own report stated exactly where the Confederate picket was. The cavalry, he says, "passed up through Sharpsburg, where they encountered our pickets."

In his report to the President, (War Records, Vol. XIX, Part 1, p. 140), General Lee says: "Accordingly, the troops were withdrawn, (from South Mountain battlefield), *preceded* by the trains, without molestation by the enemy, and about daybreak (15th) took position in front of this place (Sharpsburg)." Of course Lee's outpost would be beyond the trains, and on the road along which they were advancing to his already chosen field of battle.

Colonel Voss states that the route of the cavalry was turned at Sharpsburg, towards Falling Waters. This is negatived by the report of the Confederate General Pendleton, previously cited, in which he found that we had already passed at Jones's Cross-roads, which was on the Hagerstown and Sharpsburg turnpike, eight miles north of the latter place, and which is more than five miles east of any possible road to Falling Waters.

Pendleton pursued us from Jones's Cross-roads towards Williamsport, but never saw or heard of us after he left Jones's Cross-roads, simply because we never were within two and a half miles of the Potomac. Besides, there runs no road from Sharpsburg towards Falling Waters, which lies in the concave of a deep bend of the Potomac river to the west, and can only be reached by a cross-road at right angles from the main north and south roads from Hagerstown or Sharpsburg. (See plate XLII, War Records Atlas.).

Colonel Voss also states that "from a friendly chat which my guides had with some mill hands, at work in a large flouring mill," he learned "the exact strength and location of the rebels thereabouts." As a matter of fact there were no rebels at all along any road, or anywhere else, between the fields bordering

the Hagerstwon and Sharpsburg turnpike and the Potomac River, miles away from any possible road from Sharpsburg to Falling Waters.

The mill hands were doubtless those at Fairplay Mill, at Marsh creek, about a mile west of Tilghmanstown on the Hagerstown pike. This was less than a half-mile south of where we came across the Confederate stragglers, in the cornfield, nearly a mile southwest of Jones's Cross-roads.

Colonel Voss had confused the encounter with Lee's outpost in Sharpsburg, with our departure from the Hagerstown pike near Jones's Cross-roads, and eight miles north of Sharpsburg, for he says: "In a short time we reached Sharpsburg, and here *descended* into the open country * * * . I halted the column to determine what direction to take, and had just dispatched my adjutant, with one of my guides, to a house nearby, where the guide hoped to obtain some information concerning the disposition of the rebel troops from the occupant, whom he knew, when suddenly a sheet of flame illumined the darkness for an instant, followed by the report of at least a hundred rifles sending their laden messengers about our ears. This came from a strong outpost placed at the entrance of the Hagerstown road, into the city of Sharpsburg, not more than one hundred and fifty paces ahead of us, furnishing the most conclusive proof that the rebels were in strong force in that direction. Before allowing the alarm to spread, the head of the column was turned in another direction, towards Falling Waters, on the Potomac, to find, if possible, a weaker point to pierce their lines."

Now this is strictly correct, when we *did* leave Hagerstown pike, and took to the fields, for our route at first was straight towards Falling Waters, eight and one-half miles distant, but we did not continue in that direction, for when we reached the first north and south by-road. just beyond the cornfield where the stragglers were, we took that road to the north and west, by Cross's Mill, on Marsh creek, then followed the Boonsborough and Williamsport road for a mile and a half, and then a branch road running from it north to the Hagerstown and Williamsport turnpike, where we encountered Longstreet's train. The interview at the house which Colonel Voss describes also

took place, but it was at the Doctor's house, and not near Sharpsburg, but was near where General Pendleton, at Jones's Cross-roads, heard of us, who, as described in "Battles and Leaders," Vol. II, p. 611) "crossed (Voss's) Davis's track about eight miles north of Sharpsburg." I have already described this interview, where we first learned of the presence of the Confederates in force at Hagerstown, only five miles ahead.

The statement of General Lee determines the fact that this encounter with "a strong outpost," occured at the entrance of the Boonsborough and Sharpsburg pike into the latter place.

Colonel Voss, continues: "By this time a bright starlight had succeeded the impenetrable gloom of the early night, enabling us to discern surrounding objects more distinctly. We were also guided *in choosing our path* by the faint glimmer of their bivouac fires. The column was gathered close in hand, the order to charge given, and my brave fellows, etc., etc."

The expresssion, "we were also guided in choosing our path," shows that Colonel Voss had a recollection that we were not then traveling along any road, but picking our way through fields, and his other statement, "the faint glimmer of their bivouac fires" confirms this, for troops do not bivouac at night in the middle of a road, when there are luscious "roasting ears" in the fields near by.

Then, as I have already stated, we did come out into the Boonsborough and Williamsport road, just opposite and half a mile south of St. James College, as Colonel Voss states, but which we could never have accomplished if we had taken the Potomac river road from "Sharpsburg towards Falling Waters," or Williamsport.

Colonel Voss says, of the capture of the train, in his unofficial report: "The dawn of early morning was just approaching when we were on the point of crossing the turnpike, about two and one-half miles from Williamsport. Suddenly the low rumbling sounds of heavy carriage wheels were heard on the pike. The column was halted. The leader of the advance reported a large wagon train in sight, coming from Hagerstown, escorted by cavalry and infantry. Two of our foremost squadrons were then ordered forward, and under command of Colonel Davis, of the 8th NewYork, attacked and routed the escort,

capturing the wagon train. It proved to be one of General Longstreet's ammunition and commissary trains, consisting of eighty-five army wagons, each drawn by six fine mules, and loaded with ammunition of war and provisions, and was followed by about thirty or forty young steers. We regretted that we could not permit this train to reach its destination, so we made it keep us company, and placed it in the van of our column, detailing for each of the rebel teamsters a sturdy trooper with pistol drawn, to keep him on the right road."

He adds that we were pursued for a while by rebel cavalry, hastily gathered together, and accompanied by two light field-pieces.

As I was in the rear guard, and it was broad daylight, I saw a pursuit on the road attempted by some horsemen, but I did not consider them to be strictly cavalry, but mounted officers and guards of the train, some of whom we picked up, among them the wagon master and guide, the Pennsylvanian of whom I have spoken. The field pieces, if there were such, remained on the pike and fired across the triangle, and so did the infantry guards when they came up, who ran across the triangle firing, for a half mile or more, but we soon left them behind.

General Pendleton, in his report, decsribes it as "the large wagon train proceeding by the Hagerstown road through Williamsport."

General Lee, in his report of September 21, 1862, describes it as "General Longstreet's train on the Hagerstown road. The guard was in the extreme rear of the train, that being the only direction from which an attack was apprehended."

General Longstreet, in his report, mentions the exhaustion of artillery ammunition in the battle, and General John G. Walker, who commanded alongside of Longstreet during the battle, and with whom I became well acquainted after the war, told me that we had captured, in that train two-thirds of all Longstreet's small arm and artillery ammunition. That all he had left was that carried by his men, and in the caissons, except a short resupply, distributed among his troops. It was not only "one of Longstreet's ammunition trains," but his whole and only train, with the above exceptions.

General Longstreet, in his letter of April 6, 1880, to Sergeant Pettingill, says that its loss "gave us much inconvenience."

Colonel Voss gives the distance at which the attack was made as two and a half miles from Williamsport. By the official maps, it was about one and one-half miles, and two and a quarter miles across the ford of the Potomac, which was their destination, on their way down through Virginia, to recross to Sharpsburg by the ford below Shepherdstown.

The attack as described by Colonel Voss, was substantially as I saw it, excepting that our men, as General Forrest used to advise his men, the cavalry "mixed in" with the rebel train and their guards, excepting those which we sent in batches to cheer up the teamsters on their way, and look after the prisoners, who were making good time also, but not to "Ole Virginny."

Colonel Voss also says that on our approach to Greencastle "the farmers residing along the road took us for the advance of the rebel invaders, and made off with their horses and cattle to the adjoining woods," which was strictly correct, not only of the farmers, but of the scattered newly enlisted troops in and around Greencastle.

Colonel Voss also says: "As soon as practicable, I detailed Lieutenant Jonathan Slade, of my regiment, and a strong escort, to take the captured train to Chambersburg, and deliver the same to the United States Depot Quartermaster at that place. He returned with the quartermaster's receipt therefor."

I knew that this had been done, as I have stated, but not by whom.

In conclusion, Colonel Voss says of our subsequent movements: "This officer (sent down to General McClellan for that purpose), found General McClellan a few miles in the southeasterly direction from Hagerstown, making his dispositions for the battle of Antietam, and returned with his order, that I should immediately march the command I had taken out of Harper's Ferry to Jones's Cross-roads, on the turnpike between Hagerstwon and Sharpsburg, and remain there until further orders. The command was moved there without delay all except the 8th New York, which had left Greencastle with-

out orders." There were absolutely no supplies there for this or any other regiment.

This also was correct. Colonel B. F. Davis construed the orders under which he left Harper's Ferry literally, "Arrived at Sharpsburg, they will seek to join General McClellan and report to him for duty."

It should be borne in mind that while the cavalry had been placed, with the garrison of Harper's Ferry, under the command of General McClellan, this was not done until September 12th. General McClellan says in his report: "I shall here state that on the 12th I was directed to assume command of the garrison at Harper's Ferry, but this order reached me after all communication with the garrison was cut off." General Halleck, in his report, states substantially the same thing.

Regarding the position of the cavalry during the battle of Antietam, Colonel Voss, in his unofficial report, says: "Our position at the cross-roads formed the extreme right flank of McClellan's army at Antietam, where the battle had commenced, and was in full blast on our arrival. I was instructed to guard against a flanking movement directed on the part of Lee against the right wing of our Army."

General (Stonewall) Jackson in his report, (Vol. XIX, Part 1, p. 956, War Records) describes this attempted movement of Lee's left, as follows:

"In the afternoon, in obedience to instructions from the commanding general, I moved to the left with a view of turning the Federal right, but I found his numerous artillery so judiciously established in their front and extending so near to the Potomac, which here makes a remarkable bend, as to render it inexpedient to hazard the attempt."

General J. E. B. Stuart, in his report, same volume, p. 820, makes a similar statement, saying that General Jackson stated that he "would send all the infantry he could get in order to follow up the success. I executed this order, keeping the cavalry well out to the left, and awaiting the arrival of reinforcements," which failed to come.

An examination of the maps will show that this movement, if successful would have struck the Hagerstown—Sharpsburg pike near Tilghmanstown, and if defeated would have thrown

the attacking force directly through Jones's Cross-roads towards Falling Waters and Williamsport.

Colonel Voss, also, pays quite a compliment to my own command, for doing in battle what a Maine regiment had medals of honor conferred on all its members, when only one-half its men volunteered to remain for five or six days, when there was no battle, and nothing to do.

Our commander says:

"It affords me great pleasure to record here a noble example of patriotism. The time of enlistment of my brave Rhode Islanders had expired, and they could not rightfully be held any longer to the performance of military service. Yet they cheerfully followed my colors to Jones's Cross-roads (this was done unanimously by vote), and remained on duty until after the impending sanguinary conflict at Antietam was fought and won."

This was not, perhaps, so creditable as Colonel Voss colors it, for it was still early in the war, and for most of us it was but a short vacation, for "the call of the wild" brought many of these soldiers back to service again, not to cease till the guns at Appomatox were silenced forever, and our Union was unalterably secured.

Reprints and Translations.

FIELD FORTIFICATIONS BASED ON PRACTICAL EXPERIENCES OF THE RUSSIAN-JAPANESE WAR.*

1. WAR EXPERIENCES AND HOW TO UTILIZE THEM.

THE Russian-Japanese War enhanced the value of field fortifications very much; from it may be learned the lesson that field fortifications are valuable for the offensive as well as the defensive.

The practical use of fortifications during the campaign were most numerous, and an especially noticeable point was the fact that, owing to various special works upon which they were engaged, it was not possible to employ engineer officers in the supervision of the construction of fortifications. Almost without exception each detachment was forced to supervise and execute its own works. Such being the case it followed that improvement of the terrain, construction of field works, etc., were under the direction of infantry officers. Therefore training in peace time in this duty is most important.

The reason why we wish to add such a course of study to our military education, is because we recognize its great value. There is, however, one great difficulty in its accomplishment—the public, unlike military men, dislikes the work of fortifications. This dislike must first be rooted out. However, difficult it may be, there is no good reason for delaying its incorporation into the new course of study. It is very necessary that this matter should be decided quickly and properly; the

*Translated from the Japanese by Lieutenant Charles Burnett, Fourth Cavalry, Military Attaché at Tokyo, Japan.

officers especially should be made to understand this subject thoroughly, so that their study may be increased through their interest in the work.

In order to accomplish this, in ordinary cases, it would be well to have the plan of fortifications which the army is to use, made uniform; its execution can then be uniform and it will be easy of comprehension by all officers. Officers should be able to comprehend simple plans, even without detailed explanation. At any rate, ununiform execution, the lack of mutual coöperation, or the improper or disorderly practical application of entrenching, cannot be permitted for a moment. In other words, although those who have sufficient judgement with respect to terrain and the requirement of the defense can easily decide what intrenchments are necessary, it is important that every one should be able to execute such engineering work in a fairly satisfactory manner. They must know, especially, what worthless intrenchments are.

However, the first thing to be careful of is excessive haste in always constructing fortifications without regard to time or position. Not only is the work improperly done, but its value is greatly lessened thereby. Intrenchments should only be constructed when convinced of their necessity and advantage, and their actual construction must be carried out at an advantageous time. If conditions have been judged wrongly, no necessity for fortifications will arise, and their occupancy may be actually harmful. In such cases, their use must not be forced in order to prevent the entire work from becoming useless labor, or through shame arising from the mistake made. On the contrary, conditions may be such that while already completed works cannot be used often, that is no reason for considering them entirely useless. If they be defended with bravery, endurance and resolution at the time of the attack, they will prove their value.

Even private soldiers must be made to understand that, though they may temporarily assume the defensive while awaiting an opportunity for taking the offensive, they must never simply lie behind their intrenchments and make a passive defense. When the opportunity comes, they must drive out the charging enemy with the bayonet, or, while one section

of the line is held firmly, the reserve will drive out the enemy who has penetrated out position; or, during the enemy's attack, we will select a good opportunity, assume the offensive ourselves and pursue the beaten enemy.

At the beginning of the Japanese-Russian War, only half of our soldiers carried intrenching tools, but toward the end of the war, almost all carried them; in actual warfare they were not found useless by any means.

2. PLANS.

In the attempt to make military men understand the practical application of field fortifications, one great obstacle is encountered. That is, the question as to what kind of works will be constructed, and the computation of detailed plans therefor. Although people generally are deeply infected with the idea that such computations are very important, as a matter of fact, it is quite unimportant in the field. Indeed, not only are such computations usually disregarded when works are actually constructed, but, if used, more inaccurate results will follow than if temporary measures, suitable to the terrain and existing conditions, were followed.

Even though the commanding officer may be most skillful and able, and though officers may be in charge of the work, the preparation of many detail directions will take more time than the actual construction itself; and even after the work is completed, much time must be wasted in carrying out the necessary and unavoidable corrections. Even though such detailed plans be completed before the appearance of the enemy, after the latter appears, the commanding officer msut acquire a clear knowledge of the situation before he can judge where to begin work. In the case of field fortifications (position fortifications), which must be executed during an engagement, confusion cannot be avoided. All plans for such works are based on the fixed principles of science and must follow a common method; but at the same time their execution must be rapid and easy. The principal aim must be simplicity. Therefore in fortifications of the present day, detachments will never make the division of time and labor which so many people recommend. It should not be necessary for the commanding officer to take pencil

and paper in hand, but he should be able to plan intrenchments quickly from horseback, just like any other tactical problem.

In the plan of such works, the smallest permissible unit is the company of infantry working with the short intrenching tool, one-half working at a time. Similarly, in the artillery the smallest unit is the battery using the tools which they carry with them. In each detachment, there will be indicated, simply, the line which it alone, will fortify, this line always being limited to the detachment's sector of ground. In addition the artillery will be notified of the direction of fire. Although of course the commanding officer of each zone is responsible for the maintenance of his own communications and with communication with neighboring zones, this point must be borne in mind when orders for intrenching are given. When there is sufficient time, the long-handled tools will be brought up from the corps tool column, or, when the necessity arises, requisitioned intrenching and carpenter's tools will be used.

In general, it is a fundamental principle that intrenchments will be constructed by the troops which will occupy them later. Those detachments are responsible for the direct protection of their works and for the preparation of a reserve within their own sector.

3. ORDERS FOR INTRENCHING AND EXAMPLES OF EXECUTION.

(a) *Introduction.*

Fig. 1 shows the case of four battalions, or one regiment of infantry, entrusted with the defense of a front of 2,000 paces. Two battalions furnish the service of security and execute the work, while the other two form a reserve. When the hours of work are long, the reserve relieves the other battalions. Strong points d' appui are constructed, while the reëntering part has a comparatively weak profile.

In Fig. 2, the enemy has approached within effective rifle range and the first period of occupancy of the works after the withdrawal of covering detachments is shown.

Fig. 3 shows the detailed subdivisions of the defensive line.

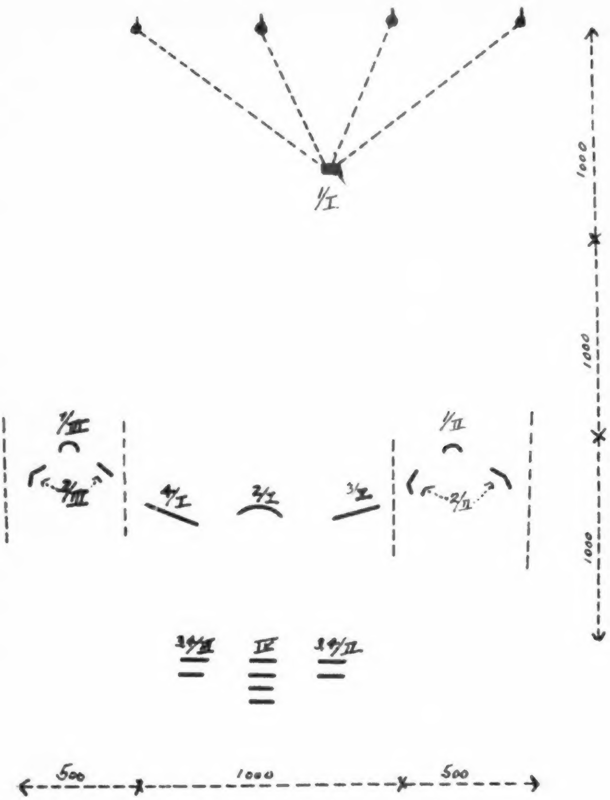


FIG. 1.

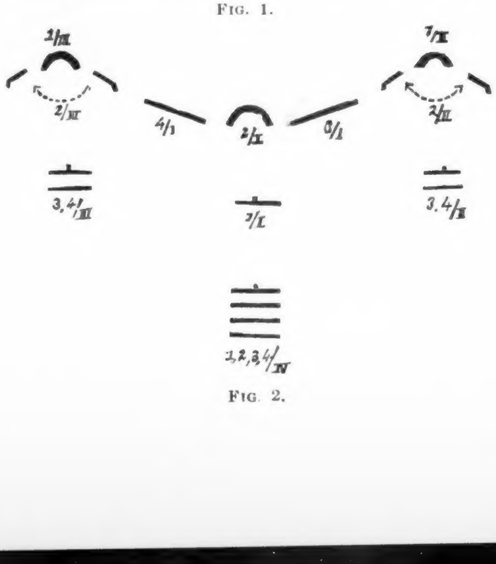


FIG. 2.

When the defensive line and the limits of the flanks, or its breadth, are clearly shown by the map (it is much better to indicate the above on the ground itself), an infantry battalion begins its advance in the direction of the indicated line. If conditions permit, mounted officers may be sent ahead to reconnoiter the line where intrenchments are to be constructed, and they guide the different subdivisions to their proper places. Upon arrival at the position, those officers will use soldiers as markers to indicate both flanks of the line where the work will be begun, and the points of the curves as well. They will then order the work to be begun.

Whenever soldiers are used to mark the position, the position of the support and the mutual relations of each subdivision

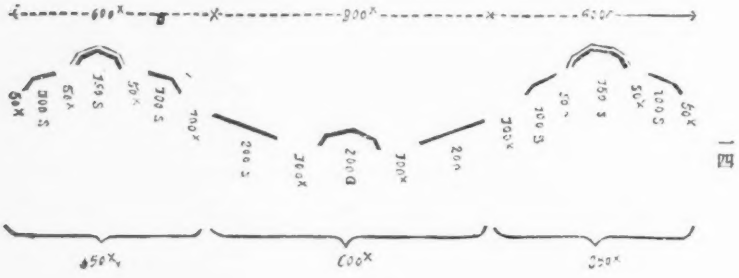


FIG. 3.

with respect to the line to be fortified, are clear at a glance. Not only is it possible to judge of its suitability or otherwise, but it has the additional advantage of enabling battalion and regimental commanders to easily and quickly rectify mistakes before the beginning of the work. In this rectification, it is sufficient to move the soldier markers to the desired position.

In order to divide the ground among the battalions, it is only necessary to mark two or three lines on the map or on the pencil sketch. Each battalion commander, or his adjutant, after examining the regimental commander's map, will copy the sector assigned his battalion. As everybody knows, forty-five minutes is required to construct the simple skirmisher's trench, while one hour and forty-five minutes is required for the complete trench. When such practice has been carried out two

or three times, even non-commissioned officers understand how to direct the work.

The profile of the skirmish trench depends entirely upon the terrain. The parapet should only be of sufficient heighth to obtain a good field of fire; it is impracticable to state in figures

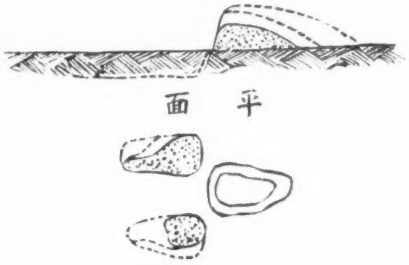


FIG. 4.

what that heighth should be. According to the time that can be spent, the kind of trench—prone, kneeling or standing—is indicated before the work begins; no other instructions are necessary. The most important matter at this time is that each man should be able to use the trench at any time without reference to the period of construction.

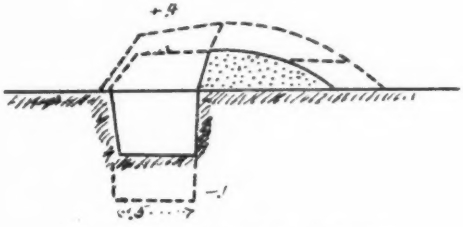


FIG. 5.—Kneeling Skirmisher's Trench.

(*b*) *Shape of Profile; Models.*

From the experiences of the Japanese-Russian War, the parapet is made as low as possible, in order to make discovery difficult; in order to provide good cover for the men, the trench was made narrow and deep.

In accordance with the above principles, the prone, kneeling and standing trenches took the following forms (See Figs. 4,

5, 6). The limit is a heighth sufficient to cover the head and shoulders of a prone skirmisher. In special cases, as in rolling country, the profile can be changed as in Figs. 7, 8 and 9, so as to conform to the natural shape of the ground.

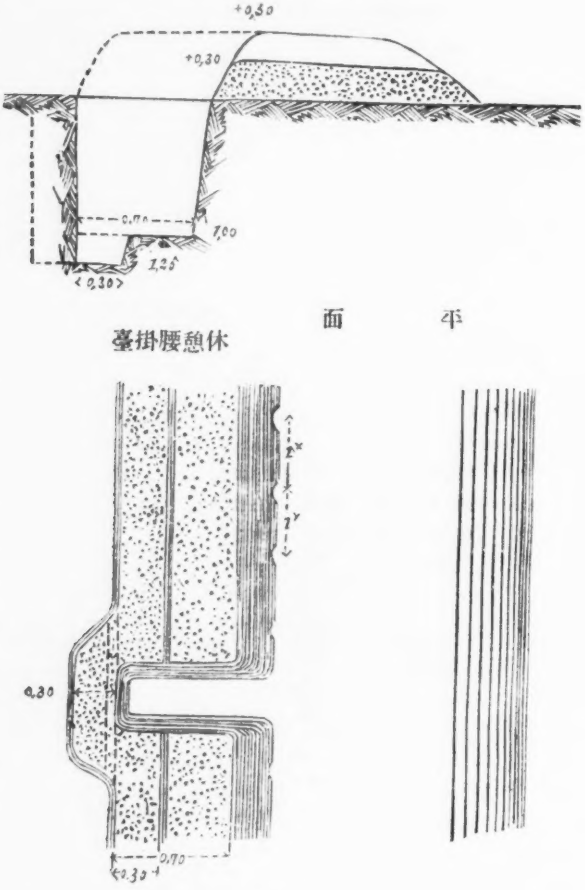


FIG. 6.

(c) *Drainage, Shelter and Clearing of Ground in Front.*

When the objective is defensive, and not merely a temporary matter the greatest attention must be paid to drainage. In the vicinity of Liao Yang, when the skirmisher's trenches and

the artillery emplacements which had been constructed a long time previously, were examined, all the ditches were filled with

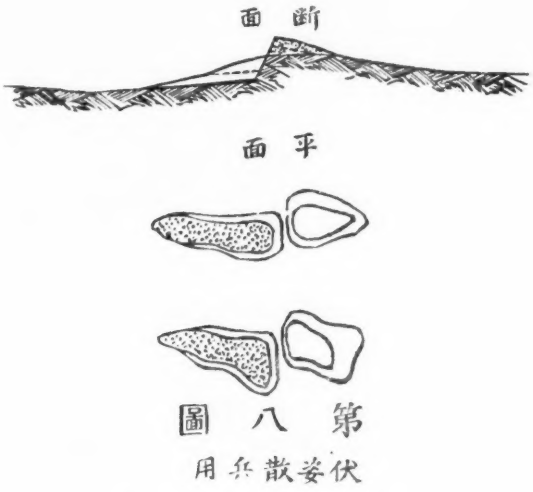


FIG. 7.—Prone Skirmisher's Trench.

water from the rains, and could be used but little or not at all. In one section of the battle line, a new artillery position had to

FIG. 8.—Prone Skirmisher's Trench.

be constructed during the battle. The offensive works of the German army at Metz and Belfort were practically useless from

the same reason. Therefore drain pipes, or drainage holes must be constructed (See Figs. 10, 11, and 12).

Intrenchments should be constructed so as to make it as difficult as possible for the enemy to see them. Accordingly, the construction of cover is important, and as few points as possible should be intrenched. At the latest, the construction of cover will be begun at once after the construction of the para-

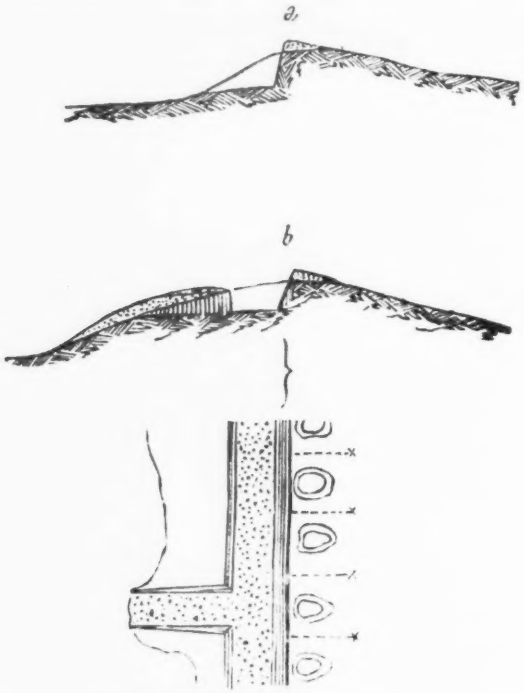


FIG. 9.—Kneeling Skirmisher's Trench.

pet. However, in the case of intrenchments prepared beforehand, whenever it is desired to conceal such preparations, or render the reconnaissance of them difficult, cover will be constructed at various ranges in front of the position before the intrenchments are begun. Whenever the color of the excavated earth differs conspicuously from that of the surrounding ground, the parapet must be covered with dirt from the latter.

The clearing off of the foreground at the time of occupancy of the position is a most important matter. It not only increases the field of fire, but protects the defender from surprise

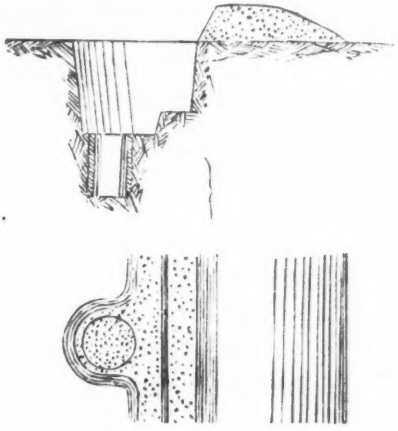


FIG. 10.—Drainage Pit.

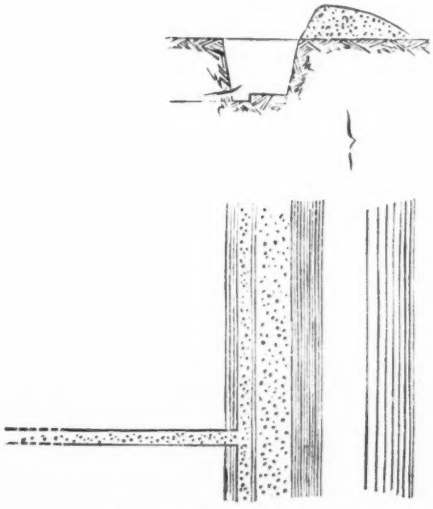


FIG. 11.—Drainage Ditch.

and renders it difficult for the enemy to make a detailed reconnaissance of the position. In such cases, anxiety about the property of the natives, or a desire not to injure such property,

will never be entertained. This matter involves the safety or danger of thousands of lives, which must not be jeopardized for the sake of a little anxiety. If the natives suffer, it is an easy matter to assist them, or to reimburse them in some other way.

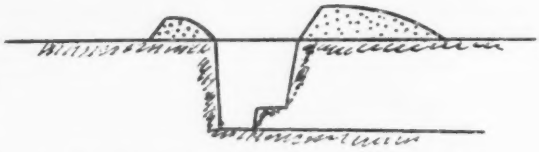


FIG. 12.—Drainage Ditch extending to the Front.

(*d*) *Manner of Using Intrenching Tools, and the Tool Column.*

According to the examples shown in Figs. 1, 2, and 3, in the detachment which is about to construct intrenchments in a defensive position, one-half are employed as a protective force and as a reserve. The other half engage in the work, one-

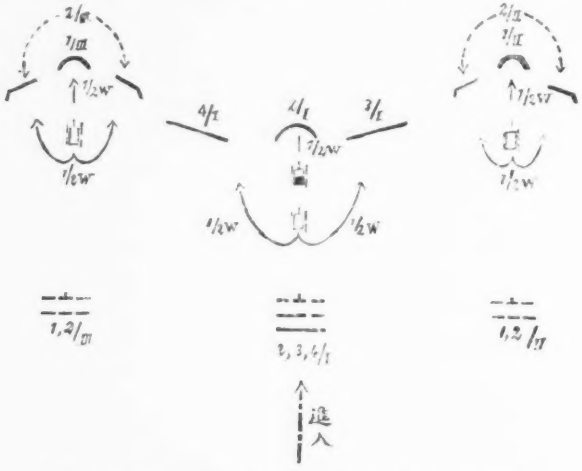


FIG. 13.—Intrenchments made with long handled tools only.

half the number acting as a relief. The number of men working at one time does not exceed one-fourth of the whole detachment.

In hastily constructed intrenchments which have not been planned beforehand, nothing but the portable short-handled

shovel is used; however, if it is desired to construct a strong profile and there is considerable time for its execution, or when it has been decided beforehand to intrench in that position, the long-handled shovel will be used. If this is done, it not only increases the rate of execution, but it is much less fatiguing to the men in the same amount of work.

The tool wagon belonging to each corps has five wagons (numbered from 1 to 5). Each wagon has the following tools: Shovels, 150; picks, 80; (total intrenching tools, 230); saws, 4; axes, 22; (total carpenter's tools, 26). Therefore, as a usual thing, the following procedure is followed in each detachment: To a half of each company, long handled intrenching tools are distributed; if the work is carried out normally, the tools from each wagon will supply two companies (½ battalion). If in each detachment only half of the men work at one time, while the other half acts as a guard and reserve where tools are not needed, one wagon from the tool column will be sufficient for each battalion. Therefore, the five wagons of the tool column will supply long-handled intrenching tools for five infantry battalions.

The small number of carpenter's tools loaded in each wagon will be used in clearing off the foreground and in constructing cover, by the detachment which is using the intrenching tools from the same wagon; they will be distributed at the same time as the intrenching tools. The pioneers belonging to each regiment will execute such special work as bomb proofs, look-outs, drainage works, and generally all work which requires the use of carpenter's tools. Four wagons, as indicated in Fig. 13, will be sufficient for the whole work.

In such a case, of the four wagons assigned a regiment, two accompany the 1st battalion; of the other two, one each enters the position with the half of the 2d and 3d battalions. After they have arrived at the position, each company receives half of the tools from one wagon, (75 spades, 40 picks, 115 tools in all). After the work has been completed and the tools cleaned, the wagon is brought to a point under cover, as near as possible to the position, in order that the tools may be reloaded.

The excess tools in a wagon will be held in reserve, for it is a fundamental principle to always distribute the entire con-

tents of a wagon to one unit. It is strictly forbidden to divide up the tools of one wagon among several detachments. According to this example, when long-handled tools only are used, five battalions can be worked at the same time, and a defensive work with a front of 2,500 paces can be constructed.

When the entire work must be finished at the same time and the salients are to be made strong with weak reëntering

FIG. 14.—Intrenchments made with long and short handled tools.

angles in the intervals, long-handled tools will be distributed to those detachments only which are engaged on the salients on both flanks. Short-handled tools will be sufficient for the intervals. This is because work can be done four times as fast with the long-handled tool, as with the infantry intrenching tool. In this case, two wagons will be sufficient for one regiment, the manner of distribution being shown in Fig. 14.

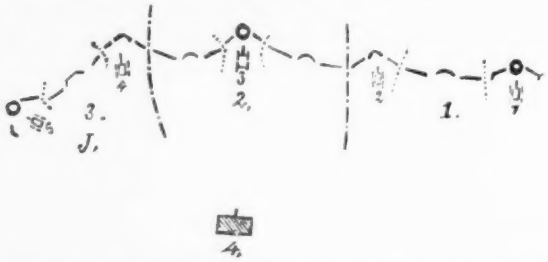


FIG. 15.—Manner of Intrenching a Division with both long and short handled tools.

Similarly, to the 2d regiment, which is engaged in constructing two re-entrants and one point d'appui, one tool wagon only is required; to the 3d regiment, two wagons are required. Therefore, in a division, three regiments are employed in the first line; if the other regiments be temporarily placed in rear as a reserve, the tools of wagons Nos. 1 to 5 will be sufficient to enable an entire division to construct hasty defensive intrenchments.

During the execution of the work, the interval between individual soldiers must be over one and one-half paces at the least; if the interval is less than this, experience shows that it interferes with freedom of movement and decreases the digging capacity of the soldier.

4. TECHNICAL ARTILLERY WORKS.

Artillery, like the infantry, should be able to execute their own intrenchments and other defensive preparations. Epaulements are of the first importance, and, next, the repair and hasty construction of communications (lines of approach). By the latter is meant the construction of special artillery roads across difficult ground from the roads in rear to the artillery position. In order to make drainage easy, gun platforms will usually be constructed on the natural surface of the ground. If this is not done, more time will be consumed in the arrangments for drainage than in the construction of the epaulement.

A work which contains several guns at small intervals is easily discovered by the enemy, and offers a favorable target for hostile fire; such an arrangement will be used only in special cases and for special reasons. As far as possible the gun epaulements must be suitable to the terrain.

With respect to communications, lines of approach suitable to the width of the carriage track will be constructed on uneven ground or on steep hill sides. Ditches, gullies and small streams which have steep rocky banks must be bridged; steep earthy banks will be cut and levelled. Existing bridges will be repaired according to necessity.

5. OFFENSIVE INFANTRY WORKS.

In order to forestall criticism, I must make an explanation here. At first glance, an attacking force would seem to require a great number of trenches, to be constructed on the skirmish line which is usually composed of more or less excited men. I will explain this matter:

The first consideration with respect to the foregoing, is that the effective fire of the enemy is never the same all along the firing line, because the effectiveness of that fire depends upon the configuration of the ground and the amount of de-

fensive preparations of the enemy's line. However, the troops which advance in the first line, on account of the losses they have already received or are about to receive, must construct artificial cover. Cover will not be constructed at the same distance from the enemy, however, and there will be many small inequalities of the surface of the ground which will require but little alterations, or no technical work whatever, to be quickly made suitable for use. In addition there will be places within the zone of attack which the enemy cannot see, and there will be more or less ground which he cannot sweep directly with his fire. In such cases, a large part of the attacker's advance is not visible to the enemy; consequently in crossing that zone there will be no necessity of constructing trenches. Therefore, the necessity of intrenching from the longest ranges is entirely exceptional and will be required only in one part of the skirmish line. However, on entirely level ground in great plains which afford not the slightest cover, the regular attack as described in the Drill Regulations will be carried out step by step, with patience and resolution. At each halting place, during the advance from one firing position to another, individual cover for prone skirmishers alone is constructed.

In the advance from one such halting places to the next, soldiers, individually, will double-time, or in most cases, crawl. In executing the advance by rushes, sufficient preparations must be made beforehand by fire action. In the meanwhile, in each firing position, in order to obtain superiority of fire, the normal combat will be begun. Such a combat is seldom decided in a day; if the enemy fight stubbornly, the fight can be expected to last two or three days at least.

At the battle of Liao-Yang, the Japanese army began an infantry attack on the 1st of September; the first firing positions were constructed, 1,000 and 700 paces from the enemy. In these positions, which were occupied for a long time, skirmisher's trenches were constructed. On the afternoon of the 2d, the first attack on the Russian position was made; the attack was repulsed, and we were forced back about 400 paces. Here we made a stand until dark, taking advantage of the trenches which had been constructed during the advance. On the night of September 2—3, skirmisher's trenches were dug 300

paces to the front; these trenches enabled us to repulse the Russian's counter attack on September 3d.

The terrain often renders such difficult work unavoidable; and it is a great mistake to consider such experiences as entirely exceptional, and only liable to happen in weeks or months.

Intrenching is of such great importance in deciding the fate of battle that it is not at all unreasonable to require such hardship from the soldiers. As an example of the great losses incurred when intrenchments are even partly neglected, there may be cited the instance of May, 1905, when three Japanese battalions advanced to the attack at sunset, from behind sandbag cover at a distance of 400 paces from the enemy's line. After a fight lasting over 24 hours, they lost 1,297 men killed and wounded, that is, over fifty per cent. of their total strength.

THE USE OF SAND BAGS.

In wars of the present day, it is really surprising how often sand bags are used; by their use rocky ground or ground frozen in winter can be defended with intrenchments. Sand bags are comparatively light, occupy but little space, and have the advantage of being very cheap. For these reasons they can be easily prepared for each soldier; they can be easily transported, and can be used for many other purposes as well.

FIG. "A."

FIG. "B."

The technical method of using sand bags is shown in the following sketches. Fig. (a)—In rocky or frozen ground, shows the method of using sand bags as cover against fragments of shell. Fig. (b)—shows how to use sand bags as head cover. In such cases they will be distributed so as to be most convien-

ient for individual soldiers. Fig. (c)—shows an example of the use of sand bags for the protection of the head and body at the time of the advance over ground which is completely commanded by the enemy (defile, deep valley, etc.). Fig. (d)—shows the use of sand bags in the passage of artificial obstacles (military pits, wire entanglements, etc.).

FIG. "C."

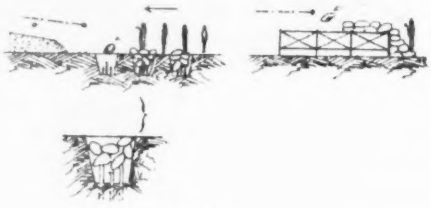


FIG. "D."

The obstacles used in the Japanese-Russian War were almost always wire entanglements, and military pits in which short stakes were erected. Abatis was seldom used on account of the scarcity of large trees. Abatis in only valuable when freshly made and its period of usefulness is very short. After

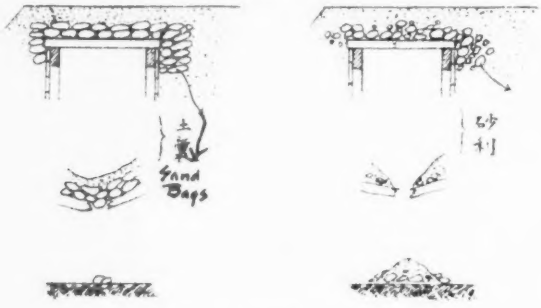


FIG. E.—Bomb Proofs.

it has once dried there is great danger of fire, as it is easily set on fire by artillery or by a special squad sent for that purpose. Therefore, it is not a good thing to use it in summer. Especially when abatis is used in front of and close to a position it is doubtful if the position can be held in case of fire. The enemy

will take advantage of the fire to press to close quarters suddenly, and if the position has been wholly or partly vacated, will quickly charge.

If materials for roofing (pebbles, crushed stone, sand, or sand and dirt) are used in sand bags in the construction of bomb proofs, it will give great elasticity, good stability, and increase the resisting power.

THE VALUE OF FOX HUNTING.*

By "UBIQUE."

EVER since the Peninsular War, when the Duke of Wellington added a pack of hounds to the forces under his command, and set an example by hunting with them himself, it has been recognized by those in authority that the sport of hunting is the finest recreation for all officers, and for staff and mounted officers in particular.

Of late years continental nations have come to recognize the military value of this sport, and the Italian, Russian and German Governments have introduced it to their armies. In fact, Germany, with her habitual thoroughness, has made hunting compulsory at certain cavalry centers and riding establishments. Fox hunting forms part of their education, and it is made a point of honor that all officers should ride straight.

In England today facilities are given to officers in almost every station in the United Kingdom to allow them to get as much hunting as possible, having due regard to their military duties. In fact, many commanding officers rightly regard fox hunting as a parade, and actively encourage their juniors to hunt. In addition, the majority of those hunts, in whose countries lie the garrison towns, are most hospitable in welcoming soldiers and most generous in asking from messes a smaller subscription in proportion than if the hunting members of those

*From the British *Cavalry Journal.*

messes were civilians. For startegical reasons the bulk of our regular army is quartered in the South of England, consequently the shires are out of reach of most officers; but hunting can be obtained near every big military station, and no hunting is so bad that it would compare unfavorably with any other sport or recreation,

Now of those officers belonging to the mounted branches of the service who enter the army year by year, a certain proportion have been, so to speak, brought up in the saddle, and are familiar with the laws and literature of hunting; but a large proportion have, on entering the service, but little knowledge of the sport, and though they usually meet with every encouragement they are inclined to under-estimate the value of hunting to themselves as soldiers and as men. The old adage that "if a thing is worth doing at all, it is worth doing well" holds as good for hunting as for all other sports, and the young officer, on starting to hunt, should give his whole attention to it and not allow the social amenities to divert his attention from the real business of riding to hounds. It has been said that "hunting is the sport of kings, the image of war without its guilt and only twenty-five per cent. of its danger," and there are certain qualities necessary to a successful squadron or battery leader that are fostered, developed, and brought out in the hunting field. In fact, it is no exaggeration to say that the combination of professional knowledge and the ability to ride to hounds makes the ideal cavalry officer.

There are certain advantages of hunting that are shared by most field sports. A man who is hunting regularly remains as fit and hard as he would were he giving up his leisure hours to boxing or Rugby football; one has only to go for a day's hunting after a long illness to realize that it is not a sport for weaklings, and conversely, one finds that after a season's hunting the longest route march does not tire. Again, hunting, in common with other sports, keeps a man out of mischief and occupies his spare time in a way calculated to develop that factor of manliness essential to a leader of men. Every sport that brings men together conduces to good fellowship, and hunting develops this to a marked degree—the pleasantries exchanged at the meet the friendly rivalry across country, the long ride home at the

end of a day with one or two companions, all help to establish that comradeship among officers that makes their life so pleasant.

To appreciate fully the advantage of hunting to the soldier, we should inquire what are the special qualities necessary to make a first-class man to hounds, and then we shall see that they are just those qualities which are most required in officers who are to be leaders of men. The most important of these qualities are courage, horsemanship, and judgment, and of them the most essential is perhaps courage, for without courage, either in war or in the chase, all other qualities will not avail. Both in the hunting-field and on the field of battle the man is most likely to distinguish himself whose daring is tempered with coolness, whose heart is always stout and hopeful, and who never loses his head. Danger there is in both; "under fire of a guinea's worth but it comes to you, in the hunting field a penn'orth but you go to it," and to surmount these dangers, courage of a high degree is necesssary.

Now courage may be subdivided into pluck and nerve, which are themselves two distinct qualities. Whyte-Melville separates them as follows: "Pluck takes you into a difficulty, and nerve takes you out of it." Imagine a man riding to hounds on a horse that does not like water. Hounds splash into and over a brook; he must follow, so puts his horse at it, determined to get across somehow. It is pluck that makes him keep his horse's head at it, but it is nerve that makes him, as the horse sticks his toes in the ground, swing him into the brook sideways, and, floundering down the stream, guide him scrambling up the opposite bank and away after the disappearing pack.

So in the real thing, when the same man is battery leader and has to bring his battery across a zone swept by the enemy's shrapnel: It is pluck that holds him to his resolve and will not let him flinch from his task, but it is nerve that makes him watch for the flashes that herald the next rafale, then shoot up his hand, stopping the teams short of the danger zone, and, when the shells have harmlessly expended their fury, give the signal that makes the battery dart like lightning across the dangerous space before the next outburst can arrive.

Assheton Smith, perhaps the finest man to hounds that has ever been known, had three favorite maxims: "Throw your heart over and your horse is sure to follow; There is no place that you cannot get over with a fall; No man can be called a good rider till he knows how to fall." Now, to live up to these maxims requires courage; there have been men who have consistently ridden well to hounds without ever getting a serious fall, but he who would excel must be prepared to have several falls and occasionally a bad one. Though it is these bad falls that do sometimes destroy the incipient pluck in a man, yet more often they improve it, temper it, and weld into it the rarer quality of nerve, thus producing the first-rate man to hounds. More falls are caused through lack of nerve than through overboldness. The doubts as to the capabilities of one's horse to jump a fence are communicated, as if by telepathy, to the animal, and he loses confidence in himself. The wrong application of the leg, or the interference with his head as the horse takes off, or the clutch at his bridle if he pecks on landing—all due to lack of nerve—cause more falls than one generally realizes, while a disposition to crane or shirk is fatal to the would-be first fighter. On the other hand, the willingness to take risks, the knowledge of how to avoid interference with the horse, and, above all, the determination to get to the other side lead to the development of a strong nerve that will help out of all difficulties. The highly strung temperament of the average man to-day is an outcome of civilization, and as modern inventions make weapons more deadly, and increase the range of projectiles, so the nervous strain on combatants is ever increasing. Thus the possession of a cool nerve, as distinguished from the impetuous hot-blooded valor of a Crillon, becomes more and more desirable.

The acquisition, then, of pluck and nerve, invaluable to the man who rides to hounds, cannot fail to be equally valuable to the soldier, and he goes into battle doubly armed who has already acquired these qualities in the hunting-field. That every mounted officer should be a good horseman and a good horsemaster is undeniable, and it must be conceded that the hunting-field provides the best opportunities to acquire proficiency in both. A firm seat is as necessary to the hunting-man as it is to the soldier, and it is as by hunting that a firm seat is gained.

Young officers on joining have usually a rather stiff seat in the saddle, acquired in the riding-school, and lack that suppleness of the body combined with the iron grip of knee and thigh that comes after long days spent in the saddle and over fences.

Grip and balance, which are interdependent, come only with practice, and the best opportunities for gaining them are to be obtained by hunting.

Not only will the rider learn how to sit on his horse, but he will learn how to assist him, to bend his body in sympathy with his movements, by bearing forward to take the weight off his quarters as he rises to a fence, by pressure of the leg to hold him at a fence and make a refusal impossible, by sitting firm and not rolling in the saddle to save his back at the end of a long day.

Although it might be too much to say that hunting confers the gift of hands, which is rather a gift of nature, yet hunting undoubtedly improves it. At any rate, one learns by experience to leave the horse's mouth alone, especially over fences, to guide him over rough country, to turn him quickly, and to stop him when necessary. Above all the young rider, if he is of the right sort, acquires in the hunting-field confidence in himself and in his horsemanship that will always stand him in good stead on service. Not only that, but hunting establishes a comradeship between horse and rider that is invaluable to both. The rider learns the capabilities of his mount, appreciates his efforts, and feels himself bound to reciprocate by studying his horse's comfort as well as his own. A man who learns to buy a horse, keep him fit, know when he is fit and when he is tired, and to spare him all unnecessary work in the hunting-field, will in war undoubtedly get the best value out of the horses under his charge.

The quality of judgment is developed in the hunting-field to a greater extent than any other quality. The term "judgment" is very comprehensive and embraces such qualities as initiative, quickness of decision and action, and the possession of an eye for country, all of which are shared by the leader of men and the first-rate man to hounds. Judgment comes by experience and observation; reading the acknowledged authorities such as Surtees and Whyte-Melville will assist in forming judgment, but reading is useless unless it be with understanding;

personal experience will bear out the truth of what has been read and will drive it home. But in order to gain advantage from what he has read and what he has experienced a man must ride with his head, must use his eyes, and observe what other men do, what the hounds are doing—what the fox has done. He should, like Facey Romford, ask: "What should I do were I the fox?" and by so doing train himself to appreciate the situation from the enemy's point of view in war. Thus, in time he will learn how to take advantage of every check and turn, how to ride for ground, to pick the best place at each fence; in short, will make himself master of the art of riding to hounds.

As in war, it is the object of a commander to sieze the initiative, so it is initiative that makes for success in the hunting-field, and the possibility of showing initiative comes only with experience and observation. "Take your own line" is advice so often given and so seldom acted upon. But a man cannot take his own line and ride it with success until he has studied the elementary rules and principles correctly. For instance, at the covertside he should make a mental note of the force and direction of the wind; how the cover is being drawn; and should then decide for himself how he can best obtain a good start without interference with the sport. Having watched the movements of the best men in the hunt, he will decide whether he will follow them or whether he will—if allowed—follow the huntsman. But it is when hounds go away after their fox that the critical moment comes, for it is then that initiative is so important and the quick decision followed by the quick action will make or mar the pleasure and success of the day. "Shall I follow that crowd that is making for the gateway or shall I jump these rails in the corner and get away by myself?" An instant's hesitation is fatal either to your chance of getting a good place at the gateway, or to your chance of getting over the rails, for in the latter case your hesitation will be communicated to your horse, and he will probably decide that it is better and safer for him to join the other horses.

As in hunting, more runs have been lost through indecision and uncertainty than from want of courage, so in war, more battles have been lost through the same causes.

The study of ground is of the greatest importance both as a means of acquiring that "eye for country" so important for the squadron or battery leaders, and also as a means of acquiring the art of riding straight to hounds wih the minimum of discomfort to horse and rider. A judicious choice of ground is essential to success in this direction. In every run occasions abound when a man who keeps his eyes open and rides for ground may save hundreds of yards and be in a position to take advantage of every check that may occur. The rider should always make for the ground where the foothold is smooth and sound; in plough the furrows where the water is standing offer the best and easiest passage; ridge and furrow should be crossed aslant; the rider should keep an eye to blind drains; the fox will, as a rule, travel down wind, so the rider should choose a line to leeward of the pack but not so far from them that a turn into the wind would leave him far behind. The tendency of many young riders is to follow close upon a pilot or upon tail-hounds; both practices are reprehensible, and will bring their followers into deserved unpopularity. In a strange and intricate country one is often obliged to choose a pilot and follow him, but this does not mean that his footsteps should be dogged as if he were a criminal! The follower must give his pilot plenty of room and avoid jumping directly behind him. The feeling that if one falls one will probably be jumped upon is most unpleasant and calculated to upset the nerves of the boldest rider. It is usually possible to jump to one side of the pilot, and the follower should harden his heart and pick out his own spot in the fence even though it is stiffer than that selected by the man he is following. An even worse crime is to ride close upon hounds; nothing upsets them more, and the rider who does this spoils the sport for himself and for everyone else. The rider then must first gain for himself a quick start by making up his mind what is the right thing to do, and then doing it at once; secondly whether he is shaping his course by hounds or by pilot, he should make the best use of the ground he will traverse, pick his own place in each fence, and ride for that place with resolution and determination. He should always keep an eye forward for indications as to what direction the fox has taken, such as distant hollows, ploughmen waving, sheep bunching in a field.

If hounds check and cast themselves, he should stand still dismount to ease his horse, still with an eye forward; ready to be up and away the moment hounds hit off the line. As it is the soldier's business in war to take risks so as to be able to strike quickly, so in the hunting-field should one be prepared to jump an ugly place at short notice so as to get away quickly; but as the soldier, so the rider must, by using his judgment reduce to a minimum the risks that he must run.

Experience and observation will show the best way to overcome all obstacles; by observation the rider will learn that the banks of a stream are soundest in the neighborhood of trees and by experience will learn to estimate correctly the strength of rails. It is observation that makes the rider to recognize country as he gallops over it, to forsee obstacles, to take in features and remember them again. In no way can this eye for country be acquired so well as by riding one's own line to hounds, and officers on the staff, and, in fact, in every branch of the service gain incalculably by its acquisition.

As officers are given such exceptional facilities to hunt, it is "up to" them to give a thought to their profession when hunting. Many keen hunting men when on a railway journey amuse themselves by imagining that they are hunting over the country parallel to the line, and are able to pick out their places at each fence as it comes into their field vision. Similarly many keen soldiers will find that a ride to and from a meet is made more interesting by imagining oneself to be one of a reconnoitering patrol; and the study of features from a military point of view will be of considerable assistance. Even a late arrival at a meet after hounds have moved off may often be of use to the soldier, as he will have to exercise on occasions considerable skill and ingenuity in finding hounds quickly.

The advantage of the ability to ride across country was brought home to the writer very forcibly during last year's maneuvers. On one occasion he was sent out on a night reconnaissance in a country over which he had hunted some years previously. Remembering the lie of the ground he was able to reconnoiter mounted up to within half a mile of the enemy's main position by riding across the fields that lay between the cross roads held by the hostile outposts; and he was able at

dawn to lead a battery into a position that enfiladed the enemy's trenches at a very close range. Again, on the last day of army maneuvers, while employed as reconnaissance officer, he saw troops debouching from a village on the other side of a strongly fenced mile of country. His hunting experience enabled him first of all to ride up unseen so close that he could distinguish clearly the tartan of the Highland regiment that was leading, and then to gallop back straight over the country to report what he had seen without loss of time.

Generally speaking, there can be no doubt that to all arms the practical knowledge of country gained in the hunting-field is of inestimable value.

The leader of the cavalry patrol can tell at a glance what is his best way over a country, that this fence can be jumped by his troopers, that those pollards winding along the vale mean water, that that plough just ahead should be avoided if the horses are to be kept fresh; while the gunner will be able to pick out a good position for his battery, and ride the straightest way to reconnoiter positions. The infantry man will show his section leaders the best way through this wood, and how to take cover in the ditch that will be under that fence—all the hundred and one little points that come instinctively into the head of a man who has ridden to hounds with his eyes open.

In conclusion, the writer would ask those who have had experience of young officers if they would not choose for initiative, resourcefulness, nerve, horsemanship, and judgment the really good man to hounds? such a man of whom Whyte-Melville has written:

> 'To whom naught comes amiss
> One haze or another, that country or this;
> Who through falls or bad starts undauntedly still
> Rides up to the motto: "Be with them I will.' "

THE BREEDING OF ARMY REMOUNTS IN CANADA.

From "*Country Life*," London, England.

HOW many men who love the thoroughbred horse, and most real men do, have thought of him as the most prepotent thing on earth next to man? Perhaps this has not occured to you who watch him prance in the paddock with spirits as gay as the silks he carries, or struggling down the stretch in game contest with his kind. You may praise his speed and courage in prose and poetry, and your artists may do their best to glorify him on canvas, but the chief feature of the breed may be overlooked in so doing.

The thoroughbred of today is the product of centuries of care and selection. It is admitted by all that his ancestors came from North Africa and Asia. He was once a hog-maned animal engaged in the fight for food, just as so many millions of men, less fortunate than the thoroughbred, are at present. I suppose that the first of the tribe was captured as a colt, probably after the mother had been killed for food, and was kept as a pet for the children of prehistoric man. Then some genius got on his back and discovered that four legs were better than two in getting over the ground. This lesson was learned by the tribe and more horses were secured. Centuries probably passed before a rope of twisted thongs was placed in the mouth of the horse so that man could direct his movements. And this invention, small as it may seem to us now, had more to do with the history of the human race than all the battleships, airships or automobiles that have ever been invented. From that time the human race advanced. The warriors on horseback ventured afar. They were known in ancient Babylonia, on the west of England, and in remote China. Ever since the horse has worked for man in peace and carried him forth to battle.

In trying to get the best of the breed, one with the most energy and the most courage, men, particularly Englishmen

have produced the thoroughbred. Such care has been exercised in selection and breeding, such ingenuity in perfecting environment, such rigid tests imposed, that the present-day thoroughbred has nothing to transmit except thoroughbred germ cells, and therefore he is prepotent, transmit his qualities without failure and improves all breeds of horses, which means the horse breeding industry. Above all other things he gives to his offspring the sureness of foot, courage, endurance and weight carrying ability required of the ideal war horse. Perhaps *too finely bred and fiery himself,* he is the *perfect sire to get a trooper or a charger from the cold-blooded farm mare.* This is an axiom of breeding which has fallen lightly on English ears, but other nations have learned the lesson, and that is why European powers come to England and pay any price for the best thoroughbreds to *breed to their farm drudges* at home. That is why France at the present time can assemble five hundred and twenty-five thousand horses suitable for war purposes in two weeks' time. That is why Germany can count on six hundred thousand well bred horses in time of stress. It is why Italy, Austro-Hungary, the Argentines, Japan and Russia have taken your thoroughbred sires. It also furnishes the reason as to why the Canadian National Bureau of Breeding was started seven years ago. This bureau started out to solve the remount problem of Canada, and also of England, by the free distribution of thoroughbred sires throughout Canada. It has placed nearly half a million dollars' worth of these horses from ocean to ocean, and has prepaid the freight, express and all other expenses to the points selected. The cost of the work for the first few years was met by prominent Canadians who believed in the undertaking as a bond of Empire and an aid to Imperial defence. So much has been said about Imperial defence, and so little real work done in that direction, that these men have sworn by the bones of immortal Bend Or to "say nothing, but saw wood," and I may be called to task for giving this news about the bureau; but there have been many enquiries during the past year or so from England, and it is perhaps just as well to state some plain facts.

For the past three years the National Bureau has been aided by the Canadian Government and by some of the Provincial

Governments. This has made it possible to extend the work until the thoroughbred sires are strung out from Bridgetown in Prince Edward Island to the shores of the Pacific Ocean and from the American boundary to the Sub-Artic. In all places they have attained good results when bred to native mares, and there are already over one million dollars' worth of their produce in Canada. In New Brunswick, for example, Ostrich, a grandson of Bend Or, has produced one hundred and twenty-one colts in four seasons. From end to end of Quebec, Bureau sires are producing handsome colts. Ontario has been attended to from Ottawa to Algoma and south to within sight of Lake Erie Manitoba has hundreds of these half-bred colts, and they are winning prizes all over the Province. Saskatchewan and Alberta have been looked after thoroughly, and the Bureau work has been extended into the Okanagan country in British Columbia and over the Rockies to the Pacific.

A great portion of the work in Western Canada is done by Englishmen. Many of them have served in cavalry regiments and know what cavalrymen need. Some of them hunted to hounds over here, and as soon as the young half-breeds arrive there comes a call to the Bureau for hound puppies. There you see the old spirit of sport and war, and the Bureau has found it existing on the Peace River frontier, one hundred and ninety miles north of the farthest north mounted police post, not to speak of railway lines. Your sons, the real pioneers of Empire are out there fighting the good fight of race expansion alone but their love for the thoroughbred and his get has not been cooled by hardship and solitude. They are sportsmen all and fighters at the front of Empire. Some day they may have to bear the shock which race pressure has always brought about. When that day comes they will have good horses to ride. And rest assured they will go forward, for there are two living creatures which never know when to quit—a good white man and a real thoroughbred horse.

Together they have always travelled, and where otherwise can Nature show such efficient carriers of type? Look over the list. Nature has tried the tiger, with his sharp teeth; the crocodile, with his coat of mail; the turtle, with its hard shell; the elephant, with its huge size and strength; the snake, with its poison

sac; the eagle, with its flying power and rending beak; the great and small, from the masodon to the malaria microbe; but her greatest triumph was man and his friend, the horse. Man astride of the horse has eaten everything, slaughtered everything, conquered everything, plant and animal. He has made a "den" rug of the tiger; the tusk of the elephant he has changed into bri-à-brac; the eagle is stuffed and decorates his hall. He makes shoes out of the crocodile's hide, and the turtle is in his soup. For a time it seemed that he might be stopped by the infinitesimally small, that the microbes might stop his onward march, but these he now has sealed up in test tubes classified and labelled. He feeds the few which are at large on debilitating serums before turning them out of his human system. Man, the embodiment of force goes over the earth arrogant and all-powerful. And the greatest conquerors among men have always advanced on horseback.

JOHN F. RYAN.

CAVALRY HORSE IN ACTION.

From "*The Field Illustrated*" of October 4, 1913.

WE usually look for real and authentic information in the columns of the New York *Herald*, but when we are told, as we were in last Sunday's edition of that paper that "when there is real business to be done, bodies of mounted troops nearly always move on a jog trot," and "that modern cavalry was almost never called upon to gallop except in retreat." As this piece of information emanated from the late Charles L. Railey, horse-dealer, we suppose we ought to believe it, if we don't, we have no doubt that all the great cavalry generals of this and other countries will. It was Cronje's, and particularly De Wett's wonderful speed and mobility that gave England *all* the trouble in South Africa. They were all mounted, and so fast, and their horses so fit, that they took, through speed alone, position after position tried for by the British; cut their lines of communi-

cation time and time again, turned their flanks and out galloped and out maneuvered them upon unnumbered occasions. "The jog trot"—Great Scott! We wonder whether that most excellent and lamented gentleman the late Mahdi broke the British squares at a jog trot, or whether General French, after he had got together the fastest and lightest cavalry the British Empire was capable of producing moved at that dignified gait. Amusing, very.

THE ARMY HORSE.

By First Lieutenant ROBERT M. DANFORD, Fifth Field Artillery.

(From *The Thoroughbred Record* of September 6, 1913.)

AS a constant reader and loyal admirer of your paper as a lover of well bred horses, particularly the thoroughbred, and as an officer of the army who is deeply interested in mounting our soldiers on American bred horses that cannot be surpassed by those of any other army in the world, I feel disposed to make reply to your editorial of August 16, 1913, under the subject "Uncle Sam has Horses for the Whole World." This editorial showed such an ignorance of facts, and such a warping of truth, that it was quite unworthy of the "*Thoroughbred Record.*" Its whole tenor was to discredit a scheme that thoroughbred interests of all horse interests should be loyally supporting, and a scheme that I personally believe and hope will be developed under the Agricultural Department in such a way as to prove of unparalleled value to the horse breeding industry of the nation.

To take exception to a few of your statements: Your first sentence—"Uncle Sam has recently embarked in the horse business on such a gigantic scale that it is not improbable the business of private breeders will be seriously affected." Mr. Haggin, in 1907 had a farm and horses beside which "Uncle Sam's farm" would look small, yet would Mr. Haggin's holdings have been considered "gigantic" for a government undertaking?

It is hoped and believe that the bussiness of all private breeders will be affected and affected most favorably, not through the breeding and sale of horses for the army, for only a comparatively few breeders could be engaged in that, but through government disseminated information concerning improved methods of breeding; scientific study of heredity and the laws of breeding; methods looking to the elimination of the enormous waste caused by barrenness of mares and impotence of stallions; the extravagance and loss caused through zig-zag breeding, and also through the use of any but vigorous, sound and pure bred stallions; in short, a campaign of education in animal breeding and heredity that can have no other than a beneficial effect on the breeding industry of the entire nation. If the business of private breeders be not favorably affected, it is realized only too fully that the scheme can never live, for Congress will not be guilty of appropriating public money for something that the voters do not want.

Your second sentence—"He has started what is probably the largest horse farm in the world, a farm of 5,500 acres," etc. Look at the Government farms of France, Germany, Austria and Russia, and note how our little one pales into insignificance. Take the German Imperial Stud at Trakenen. It covers 10,855 acres and is under the management of Baron Von Oettingen, who is the author of that most interesting and valuable book, "Horse Breeding in Theory and Practice." In 1909 there were 1,700 horses at this stud. These included twenty-one stallions of which thirteen were thoroughbreds, one an Anglo-Arab, and the rest half-breds reared at Trakenen, they having a distinct preponderance of pure thoroughbred blood. It is the work of the five imperial studs of Germany to breed stallions for the rural districts. When Germany purchased Ard Patrick and Galtee More at prices approximating $100,000 each, did she do it for fun, or to compete with private breeders? She purchased those magnificant animals that she might put them in her Government studs, where they could have the best mares the Government money could buy, to produce stallions to send to her rural districts. She thus through the sons of these great horses threw their blood into

every corner of the Empire. Did individual breeders suffer, or profit, thereby?

"He (Uncle Sam) intends to start several (farms) and turn out thoroughbreds by the thousands." The army is in profound ignorance of any such intentions.

"Today the farm is supplying the United States Army with mounts." True, the army is very small—so small that there is one mounted soldier for every 5,000 of our population, yet it is not small enough to be supplied with mounts from "Uncle Sam's farm." The farm has not furnished a single mount to any organization in the army.

"This new venture of Uncle Sam's represents an expenditure of more than $600,000 with some $400,000 yet to be spent within the year." I am not informed as to the original cost of land, but Congress has appropriated to be "spent within the year" $150,000.

You distort and deride the work of Captain Conrad and Mr. Rommel. Do you consider it unworthy of officers of our army to seek to revise and perfect regulations, to study newer and better methods of attack and defense, to work to improve equipment and material that the same may be kept abreast of the time? Is it then unworthy of our officers to devote some thought and study to the improvement of our, as yet, most important weapon the horse? Why then should you endeavor to discredit the efforts of two men whose patriotism in this work cannot be questioned?

You say, "The present farm is just a starter. It has proved so big a success that Uncle Sam is already planning to start at least one more." The present farm is, as you say, a starter. Its success, however, is a matter of hope on the part of the War Department, the Agricultural Department, enlisted men and officers of our cavalry and field artillery, and all public-spirited citizens.

A year or two ago when racing was at a low ebb, you eagerly endorsed General Wood's assertions that as a result of adverse racing legislation our best thoroughbreds were leaving the country in such numbers as to approach a "national calamity." Today with racing improving, you seem to see the specter of "thousands" of government thoroughbreds

with the bottom knocked out of the thoroughbred business, so you are ready to part company with General Wood, and assist in killing his government project. As I see it thoroughbred interests will never suffer as a result of the governemnt breeding farm. In fact they have everything to gain and nothing to lose, as I shall now attempt to prove.

If our government farm proves successful, I hope and believe that it will grow into Germany's scheme. That is, we will have at the government farm a relatively few pure bred stallions and mares carrying the best blood that money can buy. With these animals, selected to a type, we will produce stallions which after being carefully culled over, will be sent to a few communities in our best horse breeding districts, there to be mated with selected and approved mares, these mares as has already been announced, to be registered in a government stud book. Thus with carefully selected, sound, pure bred parent stock in a governemnt stud, we can control and render uniform, the quality and type of all remounts. Is such a consummation devoutly to be wished? For your answer please come with me to every troop and battery in our army and note that they are filled with mongrels and misfits, carrying every kind of blood in the world—a discredit and a disgrace to this great horsebreeding nation. One trooper rides a star gazing half-bred, gotten out of a grade standard bred mare, by an unsound cast-off from the race track; the man by his side rides a feather-legged mongrel gotten by a grade sire out of a pony mare—purchased for the army because their height and weight were according to specifications and because only professional thoroughbred and standard bred horsemen in this country have as yet learned to appreciate the value of pedigree.

What blood should be used at the goverment farm? Answering this question gives rise to a heated discussion. That excellent horsemen, Mr. Ware outlines perfectly the qualities and characteristics of the ideal cavalry horse, then sees the whole exemplified in his favorite, the standard-bred. Mr. Spencer Borden similarly describes the perfect cavalry horse, and draws thereform the conclusion that the Arabian only will answer all requirements. General Castleman and other eminent saddle horsemen see in the American Saddler

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with the bottom knocked out of the thoroughbred business, so you are ready to part company with General Wood, and assist in killing his government project. As I see it thoroughbred interests will never suffer as a result of the governemnt breeding farm. In fact they have everything to gain and nothing to lose, as I shall now attempt to prove.

If our government farm proves successful, I hope and believe that it will grow into Germany's scheme. That is, we will have at the government farm a relatively few pure bred stallions and mares carrying the best blood that money can buy. With these animals, selected to a type, we will produce stallions which after being carefully culled over, will be sent to a few communities in our best horse breeding districts, there to be mated with selected and approved mares, these mares as has already been announced, to be registered in a government stud book. Thus with carefully selected, sound, pure bred parent stock in a governemnt stud, we can control and render uniform, the quality and type of all remounts. Is such a consummation devoutly to be wished? For your answer please come with me to every troop and battery in our army and note that they are filled with mongrels and misfits, carrying every kind of blood in the world—a discredit and a disgrace to this great horsebreeding nation. One trooper rides a star gazing half-bred, gotten out of a grade standard bred mare, by an unsound cast-off from the race track; the man by his side rides a feather-legged mongrel gotten by a grade sire out of a pony mare—purchased for the army because their height and weight were according to specifications and because only professional thoroughbred and standard bred horsemen in this country have as yet learned to appreciate the value of pedigree.

What blood should be used at the goverment farm? Answering this question gives rise to a heated discussion. That excellent horsemen, Mr. Ware outlines perfectly the qualities and characteristics of the ideal cavalry horse, then sees the whole exemplified in his favorite, the standard-bred. Mr. Spencer Borden similarly describes the perfect cavalry horse, and draws thereform the conclusion that the Arabian only will answer all requirements. General Castleman and other eminent saddle horsemen see in the American Saddler

the embodiment of perfection for cavalry purposes. The thoroughbreds and the Morgans have their full share of champions. All these worthy gentlemen are sincere in their views and probably none of them realize that what they desire is to make the army a market for the misfits of their favorite breed, a breed in every case produced for a specific purpose and that purpose not for the army. Perhaps I make enemies with all when I make the declaration that not one of these breeds as they stand today is a suitable breed for cavalry purposes. Why should they be, when as I stated above, they have been selected and bred, each with a distinct and well defined purpose and that purpose not for cavalry service.

The thoroughbred is the most perfect specimen of equine excellence in the world. Of all horses he is the unchallenged aristocrat. But he has been bred for the express purpose of running and winning races. He has been perpetuated through the best of his kind, the test of the best being the race course which as Count Lehndorff (from his experience in charge of the German government studs) says is "the only appropriate test, proved by the experience of two centuries." Today however the thoroughbred is being selected more and more to win a five or six furlong sprint, rather than distance races. This encourages the production of a light boned animal with little substance and an animal with such a high strung nervous temperament as to be of little use any place except on the race track. The average present day thoroughbred is not a cavalry horse.

We honor the Standard bred as an American production and one that excels in the purpose for which he has been selected and bred—to win trotting races. His conformation is becoming more and more suited to the trotting faculty, and this is not the conformation of a saddle animal. His back is getting longer which adds to his advantage in stride but detracts from his power to carry weight. His neck is short and thick which makes his training for saddle difficult. Both his trot and his gallop are most fatiguing to his rider. He is a wonderful horse and we all love him, but it is nothing to is discredit for his friends to admit that he is not a cavalry horse.

The beautiful American Saddle Horse excels in the purpose for which he has been selected and bred—pleasure animal and show horse. Is it reasonable to expect him to possess the courage, strength and stamina possessed by the thoroughbred and standard bred, which have had to undergo and survive the grilling test of the race course? And again, his mixed gaits with all the various degrees of speed represented make him undesirable as a cavalry horse.

No one wishes to minimize the many excellent qualities of the Arabian. However without going into reasons, it seems true that in the last 200 years the Arabian has stood still —the thoroughbred is in most ways an improved Arabian.

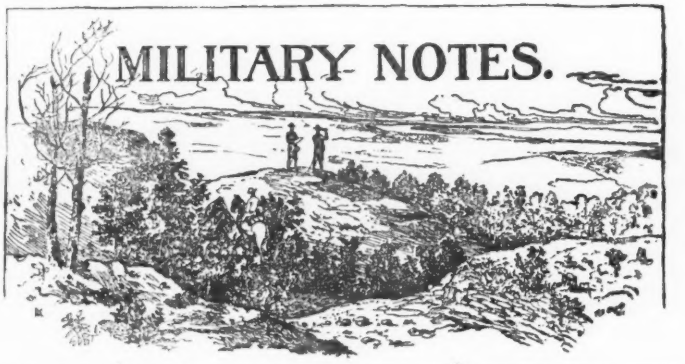
The Morgan is at present a breed in name only. It is hard to separate him from either the standard bred or the saddler with which breeds he has been crossed and recrossed. Is it not true that the standard bred and the saddler owe their excellence to the thoroughbred blood that predominates in their veins? Does it then seem unwise to accept the adopted policy of foreign governments, that of adopting the fountain head of excellence, the thoroughbred, as the blood through which to seek improvement in our army horses?

Bakewell, Bates, Cruikshank, Darwin, Mendel, De Vries and Burbank all teach the utter futility of creating a new breed through crossing. All scientific and practical breeders know how comparatively easy type may be modified through selection. It should therefore be the adopted policy of a government enterprise to take pure bred animals for parent stock and mold them into a better and more suitable army type purely through selection, be this breed thoroughbred, standard bred, saddler, Morgan, Arabian, or even Percheron. Personally I believe the road shorter and more certain of success through the thoroughbred. He has been bred pure longer than any other breed and his pedigree is accordingly more valuable. He should be selected with a view to securing more bone and substance and a better temperament. The stallion selected and purchased for the government farm should be sound and as perfect individuals as possible, also those that have withstood the test of the race course. They should be animals that have been able to carry weight over a distance. Such horses

as these would thus be the grandsires of our remounts. The enterprise would lead to government support of clean and sportsmanlike racing, as in France and Germany, and perhaps would lead to more races like the Kentucky Endurance Stakes and to the establishment of American Classics not surpassed by those of England. As I see it the thoroughbred has much to gain and nothing whatever to lose through this government enterprise.

A number of our most eminent horsemen claim that the army can get any number of suitable horses by paying more money for them. This I do not believe. Our army is so small that its influence in the horse market will never be seriously felt. The production of horses that can run and win will always be the controlling influence in thoroughbred breeding. To produce a stepper in the 2:10 list or better will likewise always be the controlling motive in standard bred breeding, and the production of a fancy priced show horse will govern saddle horse breeding. The army even at much higher prices must always, as now, be supplied with misfits and mongrels from these three breeds, and uniformity, so much to be desired can never be secured until the government takes hold and controls and subsidizes the output for the army.

The scheme now being launched by the Agricultural Department in coöperation with the War Department, will it is hoped, benefit at least a few breeders financially (as liberal prices for remounts must and will be paid); it is further hoped that it will benefit to a degree, all plant and animal breeders, in being an authoritative source of the best and most reliable information concerning improved methods of breeding. Incidentally it will in time arm the American soldier with a horse that he can know is the equal or superior of that in the hands of a possible enemy.



ORGANIZATION FOR ARMY POLO ASSOCIATION.

(APPROVED BY THE SECRETARY OF WAR.)

1. The Army Polo Association shall be organized under the direction of the Chief of Staff for the purpose of developing polo in the army and controlling it for the best interests of all concerned.

2. The officers of the Army Polo Association shall be:

(*a*) The assistant Secretary of War, who shall be *ex officio*. Honorary President of the Army Polo Association.

(*b*) The Chief of Staff, who shall be, *ex officio*, the Honorary Vice-President of the Army Polo Association.

(*c*) The Delegate from the Army to the Polo Association of America, who shall be, *ex officio*, Chairman of the Army Polo Committee and its representative in all dealings with the Polo Association of America, (in case of vacancy to be selected by the Central Committee in consultation with the Polo Association of America).

(*d*) The Secretary, who shall be appointed annually by the Chief of Staff. The Secretary shall also act as Treasurer of the Army Polo Association.

3. The control of polo in the army shall be vested in the following committees:

(*a*) The Army Polo Commitee, which shall be composed of one Polo Representative from each post or station where polo is played. Each Polo Representative shall be appointed by his Post Commander, and shall transact all business through the Post Commander.

(*b*) The Central Commitee, which shall be composed of one officer of cavalry and one officer of Field Artillery appointed by the Chief of Staff from the officers of those branches stationed in Washington, the Polo Representative from Fort Myer, Virginia, and the Secretary of the Army Polo Association. The Chairman of the Army Polo Committee shall be an active member of the Central Committee whenever he is in Washington.

(*c*) The several Post Polo Committees which shall consist of the Post Polo Representative (appointed by the Post Commander) a representative from each duly orgainzed Polo Club from organizations stationed at the post (elected by the Club), and the duly elected Captain of each duly organized polo team from organizations stationed at the post (*ex officio* members).

4. The duties of the Post Polo Committee shall be:

(*a*) To exert every proper effort to further the development of polo in the several posts.

(*b*) To bring to the attention of the Central Committee all matters requiring the action of the War Department or of the Polo Association of America, and to keep the Secretary fully informed of the progress made in polo at the several posts.

(*c*) To take prompt action on all matters referred to them by the War Department, the Polo Association of America, through the Polo Delegate, or the Central Committee, to make timely preparations for the entry of teams in tournaments approved by the War Department, and to comply with all arrangements made for tournaments which have been made by the Central Committees.

(*d*) Not to enter any tournament in which civilians participate without referring the matter to the Chairman of the Army Polo Committee to ascertain whether or not such tournament has the sacntion of the Polo Association of America.

5. The duties of the Central Committee shall be:

(*a*) To submit every matter of interest to Army Polo players to the several Post Representatives and to take no action of importance except in emergencies without first obtaining or attempting to obtain the concensus of opinion of the several Post Representatives.

(*b*) On or before January 1st of each year to draw up an annual program for Army Polo Tournaments in the United States and to submit such program to the several Post Representatives who shall each, on or before February 1st, return this program to the Central Committee, together with any suggestions or modifications they may desire to submit. This correspondence, together with all correspondence between the Central Committee and Post Representatives, shall pass through the Post Commanders concerned.

(*c*) Upon receipt of the program as returned by the several Post Representatives, the Central Committee shall embody as many suggestions or modifications as meet with the approval of a majority of Post Representatives and lay the amended program before the Chairman of the Army Polo Committee who shall then confer with the Polo Association of America in regard to any matters which involve the participation of Army teams in tournaments held under the auspices of the Polo Association of America. The Chairman shall then submit the program to the Chief of Staff with the request that it be given the approval of the War Department. Such portion of the program as may be approved by the War Department shall then be published promptly and sent to every Post Polo Representative.

(*d*) Before such final tournaments the Central Committee shall appoint a sub-committee to manage the details. The captains of all competing teams shall be aditional members of all tournament committees.

(*e*) In its annual program the Central Committee shall include a set of eligibility rules for players and teams which shall, after approval, govern all tournaments for the year and which shall not be departed from except by consent of a majority of captains of competing teams and the approval of the Chairman of the Polo Committee.

(*f*) In arranging annual programs the Central Committee shall be governed by the following general considerations:

1. That, if possible, some tournament play shall be provided for each regularly organized army team, even though it is impossible on account of expense to have each team participate in such tournaments as may be held to decide the Army Championship.

2. That, if possible, a series of tournaments shall be held for the purpose of deciding the annual Army Championship, which series shall include as many regularly organized teams as possible.

3. That, if acceptable to the Polo Association of America, an opportunity be given for the participation of army teams in the annual tournaments of the Polo Association.

6. The duties of the Chariman of the Army Polo Committee shall be to represent the Army Polo Association in all its relations with the Polo Association of America and to preside at meetings of the Central Committee whenever he may be present in Washington at the time of such meetings.

7. The duties of the Secretary shall be to keep the records of the Army Polo Association and to be custodian of its funds.

8. Assessments. Whenever expenditures are authorized by the Central Committee the Secretary shall notify each Post Polo Representative of the pro rata share required of his post, and the Post Polo Representative of each post shall collect this amount from the supporters of polo at his post. All expenditures shall be limited to the amounts actually necessary to transact the business of the Army Polo Association.

9. The details of this organization may be changed or amended by the vote of the majority of the Army Polo Committee, subject to the approval of the Chief of Staff.

FRENCH OFFICERS AT THE NEW YORK HORSE SHOW.

The Editor:

IN my contribution to your July 1913, number, *in re* Government Horse Breeding in France, I made use of the following expression, p. 43:

"That was a travesty of judgment, in the Charger Class at the New York Horse Show of 1910, when, a team of French officers who came with well-trained horses, from the great cavalry school at Saumur, Lieutenant Jolibois, riding perfectly a mare that made no mistakes—one of the very horses that won at Olympia in 1912—could get no better than third place."

I was mistaken in the name of the rider. It was Lieutenant de Meslon of the Fourth Dragoons. His mount was the b. m. Amazone; she won at Olympia last year. Coming again to Madison Square this year she was the cynosure of all eyes, and was properly placed in the ribbons.

I enclose herewith a communication from Baron de Meslon in the New York *Herald*, of November 21, 1913, which may interest your readers.

SPENCER BORDEN.

Having found a true sportsmanlike appreciation of their successes at the Horse Show, both from the members of the Association and from the crowds of spectators who have been in Madison Square Garden, Baron de Meslon, Lieutenant of the First French Cuirassiers, who made a tremendous hit on the tanbark with his mare Amazone, yesterday sent to the *Herald* the following:

(*Translation.*)

"I have already been here once before—for the Horse Show in 1910—and I have kept such a happy memory of the way in which I was received by the members of the Horse Show and

New York society that I was extremely glad when the French Government designated me again to represent the French cavalry.

"In 1910 our horses arrived very late—after the opening of the Horse Show—and the animals were very tired because of the bad crossing. This time we took care to have our horses reach this country a week ahead of time. Thus my comrades and myself have been more successful this year.

"We have had a real pleasure in mounting our horses in the splendor of Madison Square Garden, where there were gathered an elegant throng of spectators, of 'sportsmen' and of pretty women, such as one does not see elsewhere, and we have felt to a marked degree the great sympathy with which each one of our successes has been received.

"In speaking of this permit me to contradict a report which has spread in New York in regard to my excellent little mare Amazone, which has been called the $30,000 horse. This is very flattering for her and for myself. But I must explain that our Government, like the American Government, cannot purchase horses of great value, and Amazone was bought for only $300 from a French breeder when she was three years old. Her fine qualities then could only with difficulty be realized. *It was only after a long period of training, according to the system of the Saumur School*, that she really elicited the admiration of 'sportsmen' and has earned me many successes at the contests in France and foreign countries. Not for anything in the world would I sell her, and if the journalists having merely wished to say that Amazone is not for sale, not even for $30,000, they are right.

"After a brief trip to Niagara and Canada I shall return to France, taking with me once more a charming memory of my stay in New York and the desire to come back again to the Horse Show in 1914."

A NEW METHOD OF TEACHING GUARD DUTY IN THE ORGANIZED MILITIA.

By J. FRANKLIN McFADDEN, Captain First Troop Philadelphia City Cavalry.

GUARD DUTY both in theory and practice has always been difficult to teach in the Organized Militia from the obvious reasons that it required a great deal from the imagination, and more study at home than experience has found the citizen-soldier willing to give to the subject, so practically all theoretical instruction has to be given at the Armory, and the old method of posting sentries and asking questions was alike tiresome to both the instructor and the instructed, and wasteful in time, as of necessity men had to be separately questioned, and more time units were lost than utilized.

It occured to the writer about two years ago that this lost motion might be avoided and a new interest created if the principle of competition between individuals could be utilized in the theoretical study of the subject, and having given this method, which I have called the Guard Duty Game, two years trial in my troop, I am convinced of its success in the direction of theoretical instruction. It has resulted in a better general knowledge of the subject, and what is most important, has turned the study of guard duty from a very dull one into an interesting feature.

The plan followed is very simple and as follows:

As the weekly drill period is divided into three equal parts each platoon has half an hour in the ring, and two other periods in theoretical or practical work in other parts of the Armory. At drills when guard duty is one of the subjects, each member of a platoon is provided with a paper box, about five inches long by two and one-half inches wide, numbered with his *own* barrack room number, and inside this box is a smaller one similarily numbered, with a cover fastened on with gummed paper, and having a narrow opening in the top. In the larger boxes are

fifty colored pasteboard counters numbered fron one to fifty, about one inch square in size, and of different colors for each of the six squads of the troop.

The squads are paired at a long table, and a man from the right squad plays the game with a man from the left squad. One of the right squad, for example, draws at random from his own larger box a counter and calls out its number. His opponent then asks the question corresponding to that number found in a little book compiled by Captain M. C. Kerth, 23d Infantry, U. S. A., called "Instruction and Problems in Guard Duty for a Private Soldier," (Militia Affairs Circular No. 8). Any series of questions will do but this book furnishes a good list, with answers to each, and is well adapted for use in the Organized Militia, as the author evidently knew the weak spots in the citizen soldier's idea of what is expected from a sentry. If the question is correctly answered, the counter is retained by the man answering, and dropped through the opening into the sealed smaller box. If it is incorrectly answered the opponent takes the counter and drops it in his (the opponent's) sealed box. The process is then reversed, and the two men alternate in asking and answering questions during the alloted period.

No one likes to lose in any game. This is the spur.

The game can be continued throughout the winter until all the questions have been answered and the totals of correct and incorrect answers will place the individual and squad in their order so far as knowledge of guard duty is concerned. Not a minute is lost and everybody in the platoon is receiving instruction, errors are corrected at once and authoritatively, and from being the dullest part of our winter's work it has now become a source of interest and even amusement.

I have made this guard duty game a part of the annual competition between the squads.

The principle is susceptible of being applied by the same method to everything in which the quiz can be used as a method of instructing or fixing facts in the memory, and as it can be readily seen there is a great saving of time as well as the securing of a uniform standard of instruction which is always difficult to secure in the Organized Militia.

This account is rather detailed in its character but is purposely so in order that any militia officer can try the experiment for himself. The expense of the paper boxes is only a few dollars and the books cost five cents each, and may be obtained from the Superintendent of Documents, Washington, D. C.

The practical part of guard duty, posting sentries, ceremonies, etc., must of course be actually done, but I know the theoretical instruction is more easily absorbed by the above method than the old way.

If it is desired score cards may be substituted for the boxes. This has the individual's name and date and the subject at the top. On the left a column of the numbers from one to fifty and opposite double columns with a space at the top for the date, and the single columns marked "R" (for right) and "W" (for wrong). The questions may be then selected by using the counters or at the will of the opponent, and the answers whether "R" or "W" recorded in the column opposite. As in golf tournaments the score card is kept and the totals initialed by the opponent. The cards have the advantage of preserving a permanent record and showing where the individual is most in need of instruction, and also enables men absent to make up the competitive work.

It seems to the writer that it would be worth while if one of the Army Service Schools prepared a series of questions and answers in the Drill Regulations, Field Service Regulations, and any other subject which can be taught by quiz, for the use of the Organized Militia, in the same way as the above described guard duty game.

ARMY REMOUNTS *

Sir:

* * * * *

THE improvement of horseflesh for the army of the United States is being attempted through the establishment of breeding districts under the Department of Agriculture. Stallions of various breeds, thoroughbreds, saddle breds, standard breds and Morgans have been purchased for this purpose and are now stationed in the Central Breeding District with headquarters at Front Royal, Va., and at the Morgan horse farm, at Middlebury, Vt.

The experiment, so far, has been fairly stisfactory, considering the number of mares bred in the three seasons during which the new breeding scheme has been in operation. In 1911, 1912 and 1913, 1,583 mares have been served by government stallions, as follows: 612 by thoroughbreds, 334 by saddle breds, 396 by standard-breds, and 241 by Morgans.

It appears, however, that in the attempt to build up the quality of our horses, one important factor has been omitted: I mean the infusion of Arab blood. If we study the history of horse breeding in European countries, a breeding which is not experimental, but the result of centuries of experience, we find that the Arab blood is the foundation of every great breed and family, and that new infusions of this blood are found necessary from time to time to retain the qualities (stamina, great strength and intelligence and wonderful endurance of lungs and limbs), which have been the characteristics of the Oriental race of horses for centuries past.

The English thoroughbred traces its ancestry back to the three stallions, Godolphin Arabian, Darley Arabian and Burley Turk; the unbeaten race horse, "Eclipse," foaled in 1764, was a descendent on his sire's side of Darley Arabian, on his

* Extract copy of a letter from M. F. DeBarnville of the U. S. Remount Depot at Front Royal, Va., to the Chief of Staff, U. S. Army.

dam's side of Godolphin Arabian. Our own Morgans have a strain of Arabian blood in them and were considered years ago as being among our best cavalry horses; this was before haphazard cross-breeding almost exterminated this interesting race.

In France, 120 pure-bred Arabian stallions and 275 Anglo-Arabs are stationed in the Government "haras," and their colts are much sought after by the officers of the remount department. In Germany, the remount depots of Trakenen and Beberbeck use a number of Arabian stallions; the aim at these studs being to breed for the cavalry a half-bred having 50 per cent. of English thoroughbred blood, twenty-five per cent. of Arabian blood and twenty-five per cent. of native blood.

Austria yearly purchases stallions and brood mares in Syria and these are distributed among the breeding stations of Mezohegyes, Kisber, Babolna and Fogaras; the Gallician horse which has a strong cross of Arab is considered the best cavalry horse in the Austrian army. In Russia, the well known Orloff breed has its origin in the stallions (notably "Smetanka" and "Saltan") brought from Arabia by Count Orloff-Tchesmenki. At the Count's death, the Russian Government purchased from his heirs the entire stud which is now used for breeding the famous Orloff trotters and saddlers. Besides this, the Government stud at Streletsk breeds exclusively from pure blooded Arabian stock. In the Don province the Russian army keeps a breeding establishment where native stock is crossed with horses from Arabia, Asia-Minor and Turkestan.

It has been repeatedly proclaimed that the height of the Arabian horse is against its adoption as a sire of cavalry horses for the United States Army; but I believe that by careful selection of large, well-bred native mares to be bred to Arabian stallions a good sized product would be obtained.

Anyway their small size does not prevent the Arabian horses from being great weight carriers; the French cavalry in Algeria is mounted exclusively on Barb horses, very much like the Arab or Syrian, both being of Oriental descent. I have personally seen these Barb horses, most of whom are under fifteen hands, carry their rider and his packed saddle with five days rations'

for man and horse (a combined average weight of 225 pounds) on an all-day march under the scorching sun over rough mountain trails, and repeat this performance daily for a week at a time without showing any signs of weariness or lameness.

The late Homer Davenport stated that during his trip to Arabia, in 1906, whence he went to purchase some Arabian stallions and brood mares, Mr. Arthur Moore who accompanied him rode a small mare, eight years old, on one occasion this mare carrying nearly 300 pounds covered thirty-five miles in four and a half hours, with the thermometer at 125 degrees.

So much for the weight carrying ability of the Arabian horse; as for its staying power and speed, we may quote from General E. Daumas, who, in his book, "Les Chevaux du Sahara," relates that during the campaign of Algeria, in 1837, the general commanding the province of Oran wishing to have an important message delivered at Tlemcen loaned his own horse, a pure-bred Arab, to a native who rode it one hundred and eighty miles in twenty-four hours. General Daumas also mentions an Arab chief by the name of Ben Zyane, whom he knew personally, and who rode a mare from Medeah to Laghouat in the desert, a distance of about three hundred miles in thity-six hours.

The Emeer, Abd-el-Kader, one of the greatest chieftains of Algeria before the French occupation, claimed to have kept up a race of several miles with a flock of partridges on his horse "Aouadj."

Similar evidence of the endurance and speed of Arabian horses can be found in the book written by Lady Ann Blunt, whose father, Sir Wilfred Blunt, imported in England several horses from the Orient; also in the late Major Roger D. Upton's book.

The value of the Arab as a sire of cavalry horses has been demonstrated abroad; would it not be wise to give it at least a test in our new breeding establishment? Infusing this blood in our saddle bred and half-bred mares of good size and bone would add much stamina to these natives breeds, and endurance is what is mostly needed in a cavalry mount. I think that the test would convince many sceptics and unbelievers.

There are a number of Arabian stallions and mares scattered throughout the United States, some of which could perhaps be

purchased by the Department of Agriculture. Among these I would mention the ones owned by Colonel Spencer Borden, of Falls River, Mass., Mrs. J. A. P. Ramsdell, of Newburgh, N. Y., and the thirty or so stallions and mares imported by the late Homer Davenport and scattered in various parts of the country at the dispersal sale of the Morris Plains farm, after the owner's death. One of these stallions "Caraveen" is the only living son of the great "Kismet" an Arabian horse sent to race in India and which won every event he was entered in. Mr. R. W. Tully, of Los Angeles, Cal., owns the stallion "Ibn Mahrus," a Seglawi Jedran, bred by Lady Ann Blunt, and there are probably several other Arabs which could easily be located.

I give you the above suggestion for what they are worth, but you may remember that I have always been a fervent partisan of the Arab and Barb, and this because I have seen what they can do in army service, under the most trying conditions and over the roughest country, standing without any apparent discomfort any change in temperature. The French Chasseurs took with them to China in 1900 only Barb horses, two squadrons of the 6th regiment being sent as part of the expedition against the Boxers. These Barb horses stood the rigorous winter of Northern China after coming from hot Africa and very few died, while the fine English horses of the British cavalry suffered greatly from the cold weather and the hardships of the campaign.

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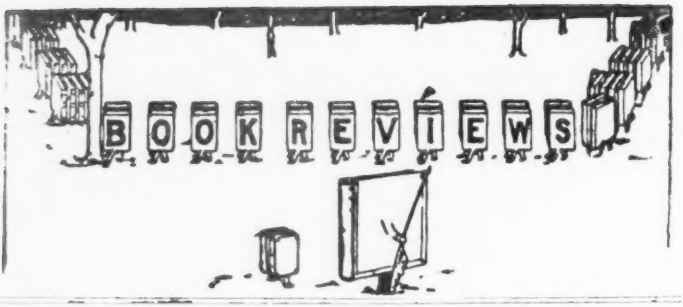

Technique of Modern Tactics.*

A new book on tactics has appeared which, judging from the opinions expressed by those at the Army Service Schools who have read it, will fill a long felt want for the student of modern tactics.

The book came from the press too late for an extended and critical review of it to appear in this number of the CAVALRY JOURNAL.

The following is a synopsis of the contents of the book:

Introduction; Organization of the U. S. Army; Road distances and camp areas; The preparation and solution of tactial problems; Field orders; Patrolling; Advance guards; Rear guards and Flank guards; Marches, changes of direction of march, camps and bivouacs; Convoys; Artillery tactics; Cavalry tactics; Outposts; Combat, attack and defense; Organization of a defensive position; Combat—attack and defense of a river line, withdrawal from action, rencontre or meeting engagements, delaying action, night attacks and machine guns; A position in readiness; Sanitary tactics; The rifle in war; and Notes on division tactics and supply.

*"TECHNIQUE OF MODERN TACTICS." A Study of Troop Leading Methods in the Operations of Detachments of all Arms. By Majors P. S. Bond and M. J. McDonough, Corps of Engineers, U. S. Army. Price, $2.65, postpaid.

The following are extracts from the Introduction:

"The purpose then of this volume is to supply in compact form the help needed by the instructor—or the student working alone—in the applicatory method of study. It is not intended as a text alone; its principal rôle is that of a guide to those engaged in the study of practical problems in tactics, either as instructor or student—for the preparation or solution of these problems. Nearly everything contained in this volume can be found elaborated in special treatises, but time is of value to the military student and this work gives in a single volume authoritatively the data that must otherwise be searched for through a small library. The organizations used in the text are those of the American service, but the tactical principles discussed are of general application. They pertain however, primarily to systematic organized warfare against a civilized foe, and have but limited application to "bushwhacking," guerrilla and savage warfare. Many minor details given in the Field Service Regulations, Infantry Drill Regulations, and other manuals, are of necessity omitted. This volume is not intended to take the place of authorized government publications.

"The apparently deliberate evasion of definite or even approximate statements as to formations, strength, distances, intervals, etc., and the frequent repetition of the phrase, 'this depends upon circumstances,' which characterize many writings on the subjects of tactics, give rise to a desire, frequently expressed, for more specific information on these and simalir matters. So far as seemed practicable the authors have endeavored herein to satisfy this desire. This is done with the full knowledge that warfare cannot be pursued as an exact science, and that the endeavor to be specific may in some instances elicit criticism.

"Whatever one attempts he should be familiar with the methods which have characterized good practice in that particular line of endeavor. When confronted with a specific case the individual searches for the underlying principles which find application therein, and it is here that his resourcefulness and originality are called into play. The authors in each case discussed have endeavored to state clearly all the principles which may be applicable, giving at the same time some concrete illustrations in figures, distances, etc., of simple cases. These

illustrations are not to be considered as models or patterns. Their purpose is solely that of illustrating the manner in which stated principles are exemplified by a stated case.

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Signal Book. We have received from the Office of the Chief Signal Officer a copy of the revised Signal Book for the Army. It is the edition which gives the International Morse or General Service Code which again has been adopted for use in our service. The old American Morse Code is still retained for use over telegraph lines.

The book gives, as usual, full and complete descriptions of the various aparatus used in visual signalling as well as instructions for their use. From it we learn that each troop, battery and company are still to be supplied with flags and it is presumed that a certain number of men in each are still to be instructed in visual signalling with flags.

Spasmodic efforts have been made in our army for the last forty years, to the writer's knowledge, to train one or more men in each organization of the line in this work but, as a rule, without success. However important this instruction may be, it has been carried on in a perfunctory sort of way, like the instruction in packing and First Aid that has been from time to time prescribed for the army, and we will in time of war still have to depend on the signal corps for such work as has been the case in the past.

Visual Signaling.* This is a small pamphlet—4"x6"—of thirty-four pages which is intended as a guide for the officer having in charge the instruction under this head in a company, battery or troop.

The short preface is as follows:

"This book is not a treatise on visual signaling. Its aim is merely to furnish a system for training men in visual signaling. The system is the fruit of the author's efforts to train men in the company in the use of the flag kit furnished by the signal corps and it is published with the hope that it may be of value to the service."

The work is divided into ten "Lessons" so that the instruction may be progressive and not carried on in a haphazard, any-old-way sort of fashion. In the earlier lessons the more simple combinations are taught and a list of words using them are given for practice. These are followed by the more complex combinations, those for the numerals and the conventional signals, The other lessons cover the general instructions for sending, receiving and recording messages.

On the whole, this work will be found useful to the officer having to instruct in this subject, especially to those who have not had previous experience in teaching it.

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*"LESSONS IN VISUAL SIGNALING." By Lieutenant M. A. Palen, 25th U. S. Infantry. Paradise of the Pacific Press, Honolulu, H. T. Price unknown.

Editor's Table.

PREPAREDNESS FOR WAR.

The following extract from the "Introduction" of a recent work by Majors Bond and McDonough, Corps of Engineers, is so *apropos* as regards this subject that it is worthy of notice. While the facts thus so pertinently set forth are and have been well known to the thinking officers of our army, yet they are not known or appreciated by the public at large. It is unfortunate that we have not, at the present time, any means of forcing the attention of the public mind to them. That is the function of the Army League which it is hoped will some day be able to carry on such work.

EXTRACT.

"The almost studied indifference of the American people toward reasonable preparation for the contingency of war makes more urgent the duty of all officers or those who hope to become officers, to do all in their power in advance to prepare themselves and those committed to their care for the immense responsibilities that will rest upon them when the storm bursts upon the nation. The trend of history shows in general a progressive decrease in the length of wars due to the enormous massing of men now possible, and the increasing power of destruction of modern weapons. The decision, in short, is sooner reached. This being the case there is more than ever before a need for adequate preparation in advance of the outbreak of war. The unprepared people or government who now-a-days find themselves on the brink of hostilities with a nation that is trained for the struggle must expect inevitably to pay a severe

national penalty: as witness the recent examples of Russia and Turkey.

"The preparation of a nation for war is of two kinds; one of material things, the constructions of fort, arsenals, fabrication of weapons, munitions, etc., the other the training of its people. And the second is more important than the first, though in the United States the estimate of their relative importance is reversed. The people of the United States are willing to vote immense sums for preparations that concern materiel, but they grudge time or thought devoted to the war training of the fighting unit—the man.

"The best training for war is, of course, the actual experience of warfare, but for practical purposes this school is too limited to be of much assistance to the actors in person. If a reasonable period of peace intervenes between wars the actors of one war are to a very limited extent only those having experience of the previous conflict. Even the general lessons of war are too quickly set aside. How little military knowledge has the present generation of Americans to show for the priceless expenditure of the Nation in the unsurpassed school of the Civil War. Wars are fought by the very young men of the country, and this is true not only of the rank and file but also of the majority of the commanders. The hope of the Nation lies therefore, in its youth, and how shall this youth be trained?

"The duty devolves upon the older officers. There is no higher mission for older officers in time of peace than the systematic development of the talents of the younger officers entrusted to their care. These young officers will be the leaders in the next war and the fate of the nation may indeed depend upon them. The nation therefore, has every right to demand of the superiors that nothing will be left undone that may prepare these youths for the trial. Thus will the superiors be exerting their powerful influence upon the course of the coming war. The methods available are the study of history, working of map problems, and terrain exercises, tatical rides or walks, the war game—all in connection with field maneuvers with troops.

"Correct training for service in campaign must aim to develop the sound characteristics of the individual, rather than

to bind him to a system. The eternal fighting unit being the man, and no two men being created alike, anything which unduly hampers the initiative or self reliance of the officer, though intended as an aid, is in fact a restraint. Hence the caution cannot be too oft repeated that the officer must exert himself to keep aloof from rigid forms or models or precedents because, as in the military service there are no actual equals in rank, so also there is no actual precedent for a military situation. Each situation is unique, as is also the man who meets it.

"Nevertheless in the broad training of large numbers of young men the whims of the individual must not be confused with his sound characteristics, lest the results of his training be as a crop of weeds. Because it is desired to develop the essential traits of each individual's character is not a reason for haphazard instruction or lack of system. Those charged with the education of officers can accomplish broader results if their methods are based on systematic effort with the fundamental idea that the system is an aid to the individual, rather than that the individual is an agent of the system.

"Outside of campaign the officer gets his schooling from the experience of handling men and from individual study. These sources are complementary, neither is complete without the other. The commander receives his education not only in the saddle, but at his desk. It is fortunate that this is so because if out door maneuvers with troops were alone of value, then the greater part of his time would have to be spent unprofitably. And no single effort expended in the peace training of officers will give greater results in the supreme test of war than the inculcation of habits of ceaseless industry.

"On Von Moltke's estimate of the value of tactical problems as a preparation for war we get and interesting sidelight in an incident related of him by a French officer who, prior to the Franco-Prussian War, was on a mission to Berlin. Von Moltke was speaking of the decadence of French military training at that time and he said to the officer: 'Have you even the superficial smattering of the elements of military art? I am tempted to doubt it. I wager that you do not know the most valuable piece of furniture of an officer in garrison. Come

with me' and so saying the old Prussian led his interlocutor into a small bed chamber suitable for a sub-lieutenant, containing a small bed without curtains, three straw chairs, shelves of books from floor to ceiling, and in the center a blackboard on an easel, the floor littered with pieces of chalk. 'It is this,' said Von Moltke, 'that we beat our adversaries every morning, and as for art, here is all we want,' and he exhibited a series of topographic skecthes.' "

CAVALRY REORGANIZATION AND DRILL.

We have received several letters from cavalry officers of the grade of captain and higher in which all decry any attempt at reorganizing our cavalry at the present time and especially do they condemn the plan propose or rather approved and recommended by the Cavalry Board and now about to be tried out in our cavalry service.

While these letters were not intended for publication—the tone of some of them unfits them for reproduction, even if they were so intended—yet the liberty is being taken of quoting from some of them.

As regards the subject of drill, many of these officers state that our present Cavalry Drill Regulations do need revision, and along the lines of the excellent Infantry Drill Regulations, yet they do not favor the proposed double rank formation and the scheme for having the old time squadron of two troops, commanded by the senior captain.

EXTRACTS.

"There have recently been put into effect measures looking toward establishing our cavalry on the lines of that of Europe. While naturally ascribing to the champions of these measures an honesty of convictions, there exists in the mind of the remainder of the cavalry, possibly as much as ninety per cent. or more, that some points have more or less been overlooked.

"Although research has been far from complete, I beg to submit the following quotations from recent European sources which seem peculiarly pertinent to the situation and which, so far as known, have not received the eminent consideration of our present reformers.

"From Cavalry Studies by General Haig, of the British service, the best book on cavalry tactics now in print, published in 1907, at page 66:

'This known physiological fact, namely, that the physical shock hardly ever takes place, should help to determine the conduct of cavalry. Only combats unscientifically entered into end in a mêlée.'

"In other words, actual contact indicates unskillful leading.

"From 'On War of Today,' the latest Clausewitz, by General Von Bernhardi, himself an eminent cavalry general, published this year, in Vol. II, at page 452:

'The low estimation in which it is everywhere customary to hold this arm (cavalry) today is solely due to the fact that people insist upon wishing to use the cavalry as an arm for battle and for charging, while they do not understand how to use it strategically, nor have organized it at all with that object. But that it can be employed in this sphere to the greatest advantage, and can also conduct a vigorous fire-fight without being unduly hampered by its horses or losing them, is sufficiently proved by the American War of Secession and by the South African War.'

"As indicating what is now being done in Germany in a practical way, the following synopsis of an article taken from a Berlin, Germany, daily newspaper, October 26, 1913, is cited:

'THE END OF THE SABER.'

'It is the intention of the War Department to shortly issue automatic pistols to all of the mounted Jagers for experimental purposes. The belief is spreading that the saber should soon be done away with in all cavalry regiments, because it is a nuisance for dismounted work and its value as a weapon mounted is of a doubtful quantity. It undoubtedly adds to the weight on the horse more than a pistol; the pistol is of equal or greater value as a weapon for a mounted man and can be used instead of a bayonet for dismounted work.'

"If there be any merits in the foregoing citations, it would seem that the charge frequently made against us, to the effect that we adopt what others cast into the discard as worn out or useless, has some foundation."

"In view of the prominence that has been given to the experiments carried on this past summer at the Winchester Virginia, Cavalry Camp of Instruction, to the glowing accounts of success of the work as sent out from certain sources, and to the resultant view which is apparently being created, to the effect that practically all the officers present approved the work of the camp, we have made inquiries on the subject and state our conclusions, as follows:

"The majority of officers present at the camp felt that considering the political situation the holding of the camp was unnecessary and unwise.

"That tampering with our organization at this time is unwise.

* * * * *

"That in assembling such a large force of cavalry, their drill in double rank only to the exclusion of applied cavalry work proper was an occasion of wasted opportunities.

"That instead of ninety per cent. of the officers there present concurring in the results and satisfaction of the Board, probably that number were of the contrary view.

"In fact, the case was summed up by one officer present who said: 'There are only two views in the camp; one is held by a majority of the Board; the other is held by everybody else.' "

"Somebody should call attention to the fact that only four field officers of cavalry are in favor of reorganization. * * *

"Gresham's article seems to have caused quite a stir. Others along the same line are to be expected.

"The attitude of the two virile young cavalrymen just returned from Europe is most gratifying. They claim that the Europeans are all off when it comes to the use of the principal weapon, the rifle.

"You will observe that the advocates of the French drill compare it, not with an up-to-date revised American drill, but with the old drill written twenty-five years ago."

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